State of California

THE RESOURCES AGENCY

Department of Water Resources

BULLETIN No. 130-65

HYDROLOGIC DATA: 1965

Volume II: NORTHEASTERN CALIFORNIA

Appendix D: SURFACE WATER QUALITY

Appendix E: GROUND WATER QUALITY

DECEMBER 1966

HUGO FISHER
Administrator
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EDMUND G. BROWN
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ORGANIZATION OF BULLETIN NO. 130 SERIES

Volume I - NORTH COASTAL AREA

Volume II - NORTHEASTERN CALIFORNIA

Volume III - CENTRAL COASTAL AREA

Volume IV - SAN JOAQUIN VALLEY

Volume V - SOUTHERN CALIFORNIA

Each volume consists of the following:

TEXT and

Appendix A - CLIMATE

Appendix B - SURFACE WATER FLOW

Appendix C - GROUND WATER MEASUREMENTS

Appendix D - SURFACE WATER QUALITY

Appendix E - GROUND WATER QUALITY

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
HYDROLOGIC DATA

AREA ORIENTATION MAP

SCALE OF MILES
40 0 40 80

I NORTH COASTAL AREA
II NORTHEASTERN CALIFORNIA
III CENTRAL COASTAL AREA
IV SAN JOAQUIN VALLEY
V SOUTHERN CALIFORNIA

METRIC CONVERSION TABLE

ENGLISH UNIT	EQUIVALENT METRIC UNIT	
Inch (in)	2.54	Centimeters
Foot (ft)	0.3048	Meter
Mile (mi)	1.609	Kilometers
Acre	0.405	Hectare
Square mile (sq. mi.)	2.590	Square kilometer
U. S. gallon (gal)	3.785	Liters
Acre foot (acre-ft)	1,233.5	Cubic meters
U. S. gallon per minute (gpm)	0.0631	Liters per second
Cubic feet per second (cfs)	1.7	Cubic meters per minute

BULLETIN 130-65

VOLUME II

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APPENDIX D

SURFACE WATER QUALITY

APPENDIX D: INTRODUCTION

The data presented in this appendix are measured values of selected quality characteristics that demonstrate the dissolved mineral and physical conditions of surface waters in northeastern California as shown on the "Area Orientation Map", which area lies within the jurisdictions of the Central Valley (No. 5) and Lahontan (No. 6) Regional Water Quality Control Boards. The data in this bulletin were collected during the 1964-65 water year, from October 1, 1964 through September 30, 1965.

Figure D-1, "Surface Water Quality Sampling Stations in Sacramento-San Joaquin Delta", and Figure D-2, "Surface Water Quality Sampling Stations in Northeastern California", show the locations of stations that are routinely sampled. Table D-1, "Sampling Station Data and Index", lists pertinent information about the station in addition to the page numbers on which data for each station may be found.

Field sampling was performed in accordance with accepted engineering practice. Comments on local conditions were noted in field books, which are on file in the Department's District office.

The data are collated, reviewed to note trends or significant changes, and published.

Changes in program operation during the year are the use of computers for tabulating dissolved chemical data (Table D-2), the adoption of the surface water measurement station numbering system, the inclusion of surface water temperature data (Table D-8), and discontinuing the collection of radioactivity data.

Specific Conductance

Specific conductance of water is a measure of its capacity to conduct an electric current. The conductance varies with the concentration of ionized substances in solution and with the temperature of the water. The nature of the various dissolved substances, their absolute and relative concentrations, and the ionic strength of the sample all affect the specific conductance. Observing variations in the conductance of a stream permits a good estimate of changes in dissolved mineral concentration. Specific conductance is the reciprocal of the resistance measured between two electrodes one square centimeter in cross section and one centimeter apart. All readings are referenced to 25·C automatically by the measuring instrument.

Specific conductance is recorded continuously at the following points in the Sacramento-San Joaquin Delta.

Sacramento River at Walnut Grove (98)
Sacramento River at Sacramento Weir
Feather River above Verona (20a)
San Joaquin River at Antioch Bridge
San Joaquin River at Vernalis (27)
Mokelumne River at Highway 12 Bridge
Italian Slough at Clifton Court Road Bridge (106)
Delta Mendota Canal at Tracy (93)

Hourly readings are taken from continuous records and averaged by computer to obtain average daily values. These daily averages are shown for two major Delta inflows, Sacramento River at Walnut Grove (98) and San Joaquin River at Vernalis (27) in figures D-3 and D-4. Monthly plots of the hourly values for specific conductance for the eight above listed stations are issued quarterly by the Sacramento District.

Chemical Analyses

Table D-2 lists results of monthly surface water sample analyses. These data are presented numerically by station number and are listed alphabetically in Table D-1 "Sampling Station Data and Index".

Discharge was derived from rating curves for stream gaging stations and represents instantaneous flow at time of sampling.

Temperature of the water was measured in the field at the time of sampling with a standard five-inch thermometer having divisions of one degree Fahrenheit.

Dissolved Oxygen was determined at the time of sampling by the Alsterberg (Azide) modification of the Winkler Method. Percent saturation has been corrected for altitude.

Specific Conductance was measured in the laboratory with a Wheatstone Bridge.

pH was measured both in the field, with a color comparator, and in the laboratory with a line-operated pH meter. Two values for pH are tabulated. The value on the first line is the pH in the laboratory at time of analysis and the value on the second line is the field pH.

Mineral Constituents were determined in the laboratory in accordance with U. S. Geological Survey Water Supply Paper No. 1454, "Methods for Collection and Analyses of Water Samples". Tabulated values are analytical quantities reported in milligrams per liter (mg/l), which is equivalent to parts per million (ppm), the computed values for milliequivalents (meq), and percent reactance values. The computations and tabulation are by computer processes.

Total Dissolved Solids (TDS) In May and September TDS was determined gravimetrically and by summation of constiuents. At other times the "summed" value was derived by computation.

Percent Sodium is the ratio of the sodium concentration to the sum of the concentrations of the cations, all values being expressed in equivalents per million.

Hardness was determined in the laboratory by the EDTA titration method.

Total Hardness is assumed to represent the sum of the concentrations of calcium and magnesium ions, expressed as calcium carbonate.

Noncarbonate Hardness represents any excess of total hardness over total alkalinity.

Trace Metals

Trace metal analyses of surface water samples were performed with an emission spectograph by the U. S. Geological Survey, following the "Concentration Method for the Spectro-Chemical Determination of Minor Elements in Water", as published in U. S. Geological Survey Water Supply Paper 1540-B. Results are reported in parts per billion (ppb), which is equivalent to micrograms per liter, in Table D-3, "Trace Metal Analyses of Surface Water".

Miscellaneous Constituents

Table D-4 lists other constituents that have been determined during the year. Coliform samples are collected monthly at most stations and the other constituents usually are sampled only in May and September.

Coliform concentration was determined monthly by duplicate grab samples by the multitube fermentation technique. Bacteriologic determinations were made by the California Department of Public Health's mobile laboratory. Results are expressed as the most probable number (MPN) of coliform bacteria per milliliter of sample. In view of the rapidity and frequency of change in the density of coliform organisms, numerous samples are necessary before a reliable evaluation can be made.

Turbidity was measured in the laboratory with a line operated Hellige turbidimeter.

MBAS. Methylene Blue Active Substances are presented in Standard Methods as "apparent ABS". It is a measure of the detergents, ABS and LAS, present in the sample. The presence of detergents is indicative of pollution by sewage.

As and PO_4 are the analytical values for the toxic arsenic and nutrient material phosphate expressed in parts per million.

Salinity Observations

Table D-5 lists salinity sampling stations within the Sacramento-San Joaquin Delta. Locations are shown on Figure D-5, "Lines of Annual Maximum Salinity Encroachment". The salinity samples were taken, when possible, at four-day intervals, one and one-half hours after high-high tide. Concentrations are reported as chloride in parts per million. The lines on Figure D-5 show the 1,000 ppm chloride line for the 1965 water year and other years of interest. Table D-6 lists the maximum observed chlorides for stations during the 1965 water year and other historical values for these stations. Complete tabulations of salinity observations made for the 1965 water year are given in Table D-7.

The Salinity Observation program is conducted by the Department of Water Resources for the U. S. Bureau of Reclamation under an annual contract.

Temperature

Water temperature records are obtained by continuous temperature recording instruments. From these records the daily maximum and minimum temperatures are extracted and reported. Contained herein are all previously obtained water temperature data for the listed stations.

In 1956, the Department of Water Resources initiated a water temperature measurement program on the Feather River at the Joint Water District diversion. Since then the measurement program has been expanded and water temperature data are now obtained on most major streams in the report area.

Table D-8 contains tabulations of daily maximum and minimum water temperatures.

CODING

Water Quality Station Numbering System

The system for coding or numbering surface water quality sample stations incorporates the Stream Gaging Station Index Numbering System, used for surface flow measurement stations and parallels the coding system being established for hydrologic areas. The Surface Water Quality Station Identification (SQI) system adds a decimal and two digits to the Stream Gaging Station Index Number (SGSIN). SGSIN has the form A xxxxx and SQI has the form A xxxxx.xx.

SGSIN is used to designate the gage, which may be an established gage, a gage which has been removed, or a possible future gage, that establishes flow conditions for the point or reach represented by the surface water quality sample. The decimal and two digits added to designate the water quality system establishes the relationship between the location of the water quality sampling point and the control gage.

A x xxxx.00	Immediate vicinity of gage
A x xxxx.10 - (upstream)	Gage is the control but sample was taken a significant distance above the gage
A x xxxx.90 - (downstream)	Gage is the control but sample was taken a significant distance below the gage
A x xxxx.50	No gage at sample location

A significant distance above or below the gage allows water quality samples to be taken in other than the gaged reach with very minor inflows existing or possible between the quality sample location and the gage. An increasing variation of SQI from the gage station number indicates a decreasing relationship with the gage.

SGSIN establishes the Hydrographic Area, Drainage Basin, Stream or Reach, and assigned number for each gage. The State has been divided into twelve Hydrographic Areas, which are equivalent to the Hydrologic provinces of the Areal Designation Code and which have been given a unique alpha designation. Within the Hydrographic Area, separate streams or drainage basins are assigned numbers, and main reaches, similarly, are assigned individual numbers. A particular station then is assigned its own unique number.

Separate stream areas or stream groups (the first numeric digit) are numbered from north to south. Numeric designations for a major stream and its tributaries and the numbers assigned to the gages begin at the mouth and increase numerically proceeding upstream.

Other Codes

Time. The time of sampling reported is Pacific Standard Time (PST) expressed in the military style.

Agency Codes. Agency coding applies to the laboratory agency. The numeral 5000 indicates the U. S. Geological Survey laboratory in Sacramento and the numeral 5050 indicates the Department of Water Resources' laboratory at Bryte.

TABLE SUBSCRIPTS

Table subscripts or footnote symbols are either defined at the bottom of the page where they appear or are defined below. Tables using subscripts which are not defined on those pages are Table D-2, Table D-3, Table D-4, and Table D-8.

In Table D-2 the following symbols are used:

a. Field pH

b. Lab pH

c. Sum of Calcium and Magnesium in epm

f. TDS determined by summation of analyzed constituents

i. Analyzed by: USGS and 5000 indicates the U. S. Geological Survey laboratory in Sacramento, 5050 the DWR laboratory at Bryte

The letters d, e, g, and h were not used.

ABS	Methylene Blue Active Substances, detergent
As	Arsenic
PO_4	Orthophosphate

In Table D-2 and D-4 the following symbols are used:

$>$	Greater than
$<$	Less than
$\leq$	Equal to or less than
L.B.	Left Bank
R.B.	Right Bank

In Table D-8 the following symbols are used:

*	Record incomplete
NR	No Record
e	Estimated

SURFACE WATER QUALITY
SAMPLING STATIONS
CENTRAL VALLEY REGION (NO. 5)

Sta. No.	Station Name
11	Sacramento River at Delta
11a	Cottonwood Creek below North Fork Cottonwood Creek
11b	Cottonwood Creek, South Fork above Cottonwood Creek
12	Sacramento River at Keswick
12b	Cottonwood Creek near Cottonwood
12c	Sacramento River at Bend
12d	Clear Creek near Igo
13	Sacramento River near Hamilton City
13b	Sacramento River at Colusa
13c	Stony Creek at Black Butte Dam Site
13d	Thomes Creek at Paskenta
13e	Elder Creek near Paskenta
13f	Stony Creek near Fruto
14a	Sacramento Slough near Knights Landing
14b	Sacramento River above Colusa Trough
15a	Sacramento River at Toland Landing
15c	Sacramento River near Mallard Slough
15d	R.D. 1000 at Second Bannon Slough
15e	Sacramento River above Sacramento Slough
16	Sacramento River at Rio Vista
16a	Calaveras River at Jenny Lind
16b	Calaveras River near Stockton
16c	Calaveras River below New Hogan Dam
16d	Calaveras River above Hogan Reservoir
17	Pit River near Montgomery Creek
17a	Pit River near Canby
17d	Indian Creek near Crescent Mills
17e	Pit River near Bieber
18	McCloud River above Shasta Lake
18a	Pit River, South Fork near Likely
19	Feather River near Oroville
19a	Feather River, North Fork at Big Bar
19b	Feather River, Middle Fork near Merrimac
19c	Feather River, South Fork below Ponderosa Dam
20	Feather River at Nicolaus
20a	Feather River below Shanghai Bend
20c	Feather River above Verona
21	Yuba River at Marysville
21a	Yuba River near Smartville
22	American River at Sacramento
22a	American River at Nimbus Dam
22b	American River, Middle Fork near Auburn
22c	American River, South Fork near Lotus
22d	American River at Fair Oaks
23	Mokelumne River at Woodbridge
23a	Mokelumne River near Lancha Plana
23b	Mokelumne River below Cosumnes River
23c	Mokelumne River below Georgiana Slough
27	San Joaquin River near Vernalis
28	San Joaquin River at Antioch
28b	San Joaquin River at Jersey Point
41	Clear Lake at Lakeport
42	Cache Creek near Lower Lake
42a	Cache Creek at Highway 53
78	Bear River near Wheatland
79	Cache Creek, North Fork near Lower Lake
80	Cache Creek near Capay
81	Putah Creek near Winters
81a	Putah Creek at Diversion to Putah South Canal
84	Butte Creek near Chico
85	Big Chico Creek near Chico
85a	Big Chico Creek at Chico
87	Colusa Trough near Colusa
87a	Sacramento River at Butte City
88	Mill Creek near Mouth
88a	Cow Creek near Millville
88b	Battle Creek near Cottonwood
88c	Antelope Creek near Mouth
88d	Redbank Creek near Red Bluff
88e	Antelope Creek near Red Bluff
88g	Paynes Creek near Red Bluff
94a	Cosumnes River at McConnell
94	Cosumnes River near Michigan Bar
95a	Elder Creek at Gerber
95b	Thomes Creek near Mouth
97	Sacramento River at Green's Landing
98	Delta Cross Channel near Walnut Grove
99	Little Potato Slough at Terminous
100	Stockton Ship Channel on Rindge Island
101	San Joaquin River at Garwood Bridge
101a	San Joaquin River at Brandt Bridge
102	San Joaquin River at Mossdale Bridge
103	Old River near Tracy
103a	Grant Line Canal at Tracy Road Bridge
104	Old River at Clifton Court Ferry
106	Italian Slough near Mouth
107	Indian Slough near Brentwood
108	Old River at Orwood Bridge
108a	Old River at Holland Tract
108b	Dutch Slough at Farrar Park Bridge
109	Rock Slough near Knightsen
110	Lindsey Slough near Rio Vista
110a	Cache Slough below Lindsey Slough
112	Old River at Mandeville Island
112a	False River at Webb Pump
112b	San Joaquin River at San Andreas Ldg.

LAHONTAN REGION (NO. 6)

17b	Susan River at Susanville
38	Lake Tahoe at Tahoe City
52	Truckee River near Truckee
53	Truckee River near Farad
115	Carson River, East Fork near Markleeville
115a	Carson River, West Fork at Woodfords
116	Walker River, West near Coleville
116a	Walker River, East near Bridgeport

FIGURE D-1

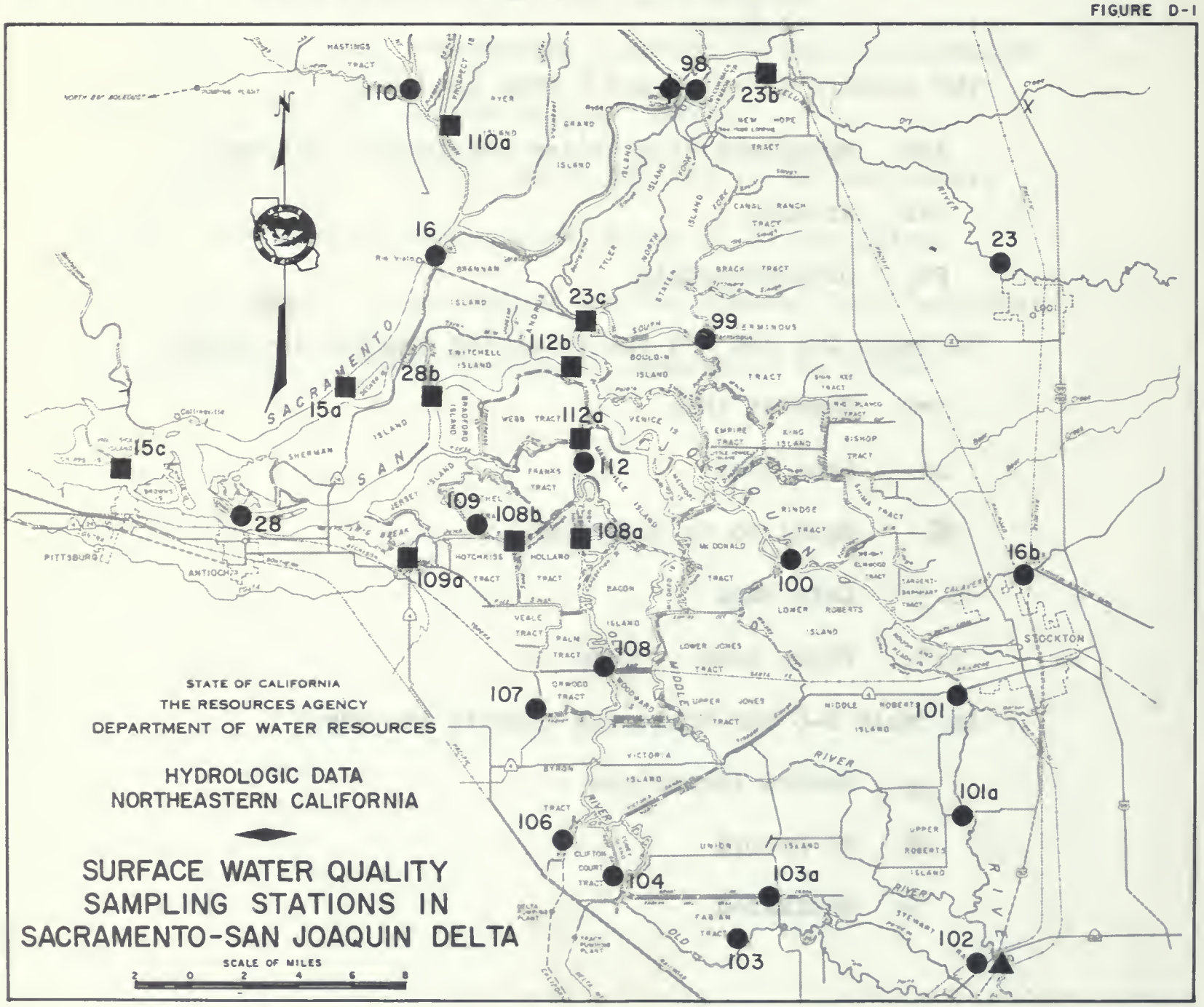
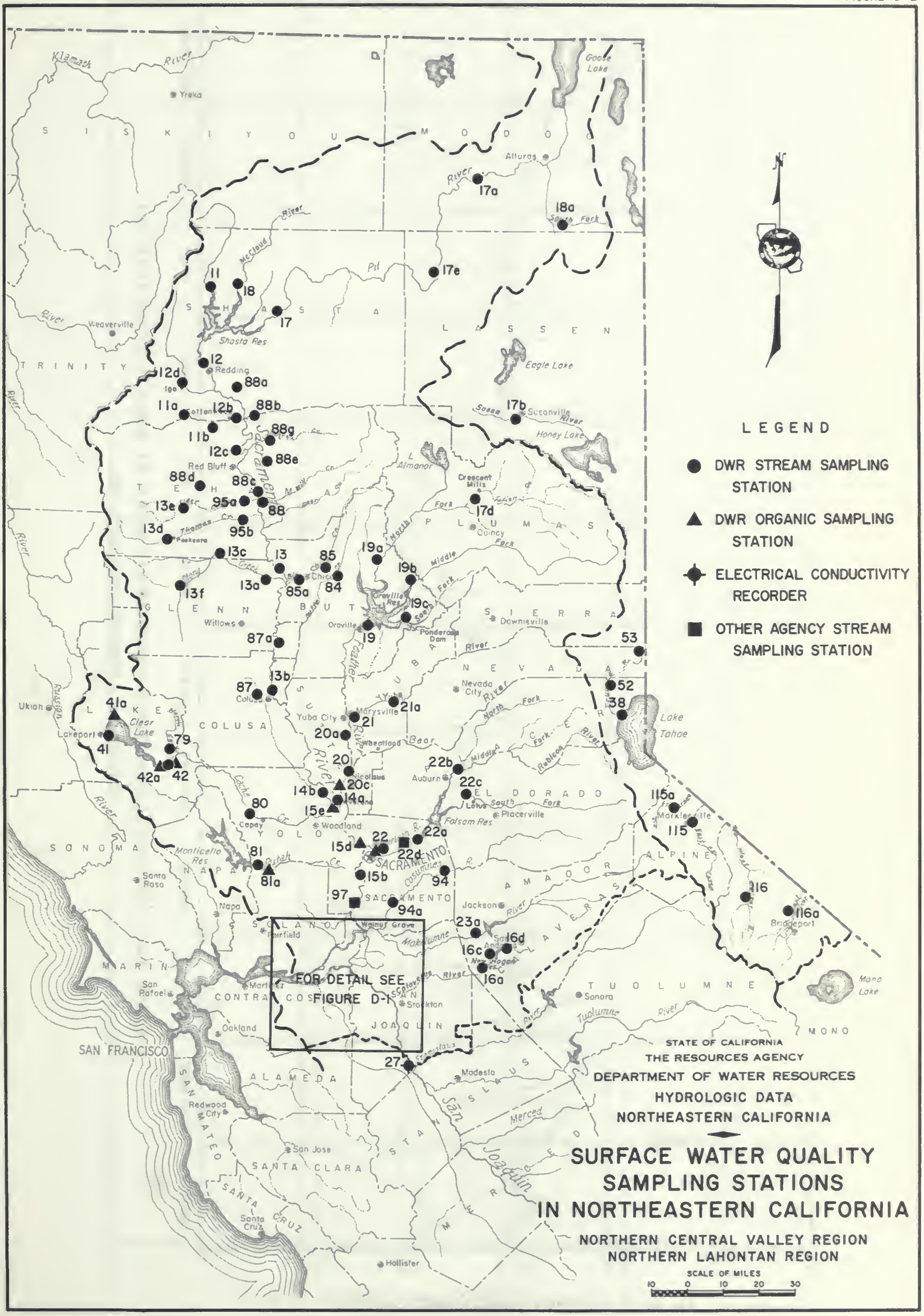


FIGURE D-2


LEGEND
DWR STREAM SAMPLING STATION
DWR ORGANIC SAMPLING STATION
ELECTRICAL CONDUCTIVITY RECORDER
OTHER AGENCY STREAM SAMPLING STATION
STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
HYDROLOGIC DATA
NORTHEASTERN CALIFORNIA
SURFACE WATER QUALITY
SAMPLING STATIONS
IN NORTHEASTERN CALIFORNIA
NORTHERN CENTRAL VALLEY REGION
NORTHERN LAHONTAN REGION
SCALE OF MILES
10 0 10 20 30
FOR DETAIL SEE FIGURE D-1
S I S K I Y O U
M O D O C
S H A S T A
L A S S E N
T R I N I T Y
T E H A M A
P L U M A S
G L E N N
B U T T E
S I E R R A
N E V A D A
C O L U S A
Y U B A
S U T T E R
P L A C E R
E L D O R A D O
A M A D O R
A L P I N E
C A L A V E R A S
T U O L U M N E
M O N O
Y O L O
S O N O M A
N A P A
S O L A N O
M A R I N
C O N T R A C O S T A
S A N J O A Q U I N
S T A N I S L A U S
A L A M E D A
S A N M A T E O
S A N T A C L A R A
S A N T A C R U Z
M E R C E D
Klamath River
Goose Lake
Yreka
Alturas
Shasta Res
Weaverville
Redding
Igo
Red Bluff
Eagle Lake
Susanville
Honey Lake
L Almanor
Crescent Mills
Quincy
Oroville
Downieville
Willows
Nevada City
Lake Tahoe
Ukiah
Clear Lake
Lakeport
Colusa
Yuba City
Marysville
Wheatland
Auburn
Placerville
Folsom Res
Woodland
Capay
Monticello Res
Sacramento
Markleeville
Jackson
Bridgeport
Mono Lake
Santa Rosa
Napa
Fairfield
Walnut Grove
San Rafael
Martinez
Stockton
Oakland
SAN FRANCISCO
Sonora
Modesto
Redwood City
San Jose
Santa Cruz
Hollister
17a
18a
17e
11
18
17
12
12d
88a
11a
12b
88b
11b
88g
12c
88e
88d
88c
13e
95a
88
13d
95b
17b
17d
13c
13
85
19a
19b
13f
13a
85a
84
19c
19
87a
53
13b
87
52
38
41a
21a
21
41
79
20a
42a
42
20
22b
22c
14b
20c
14a
15e
80
115a
115
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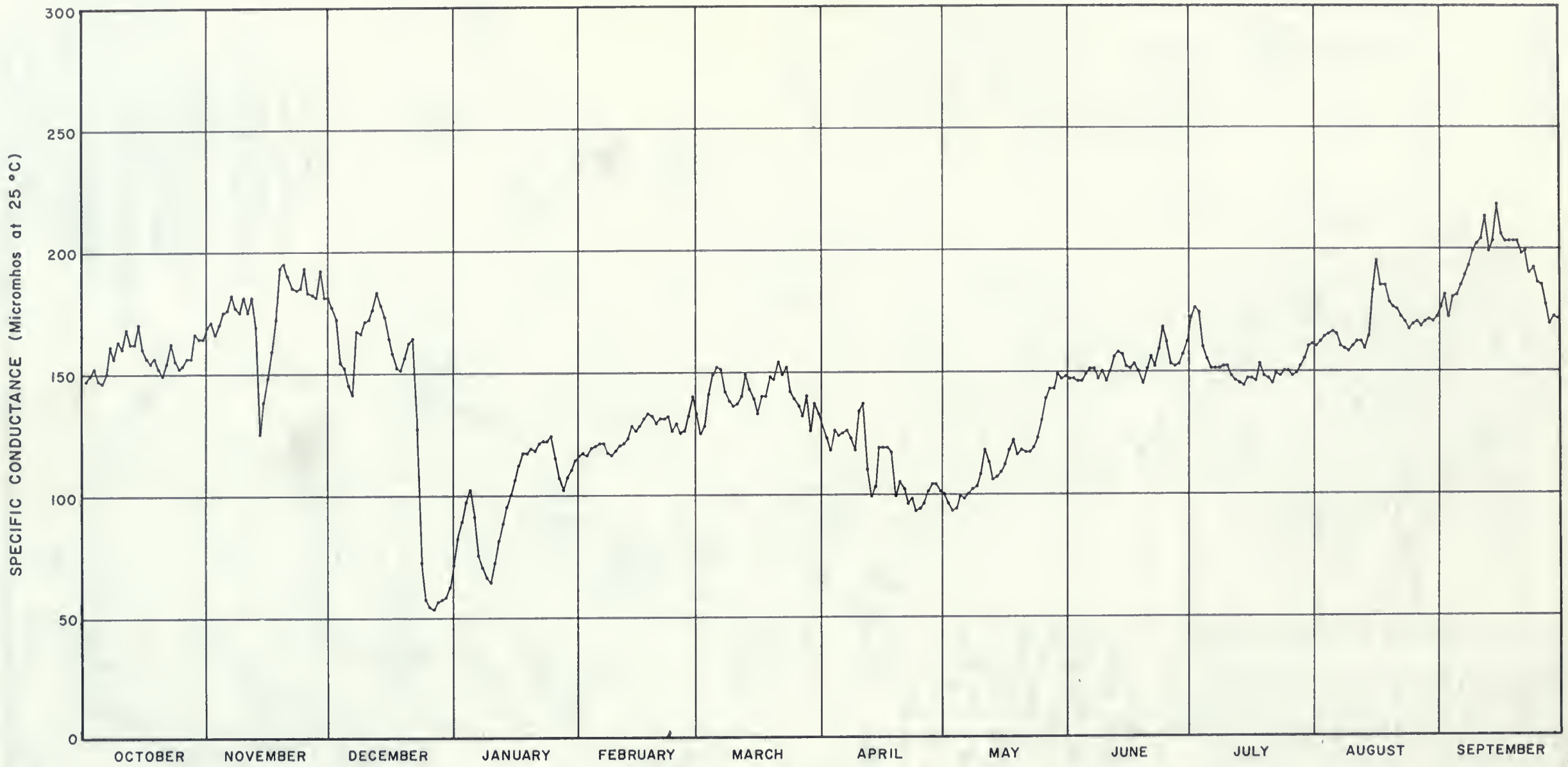
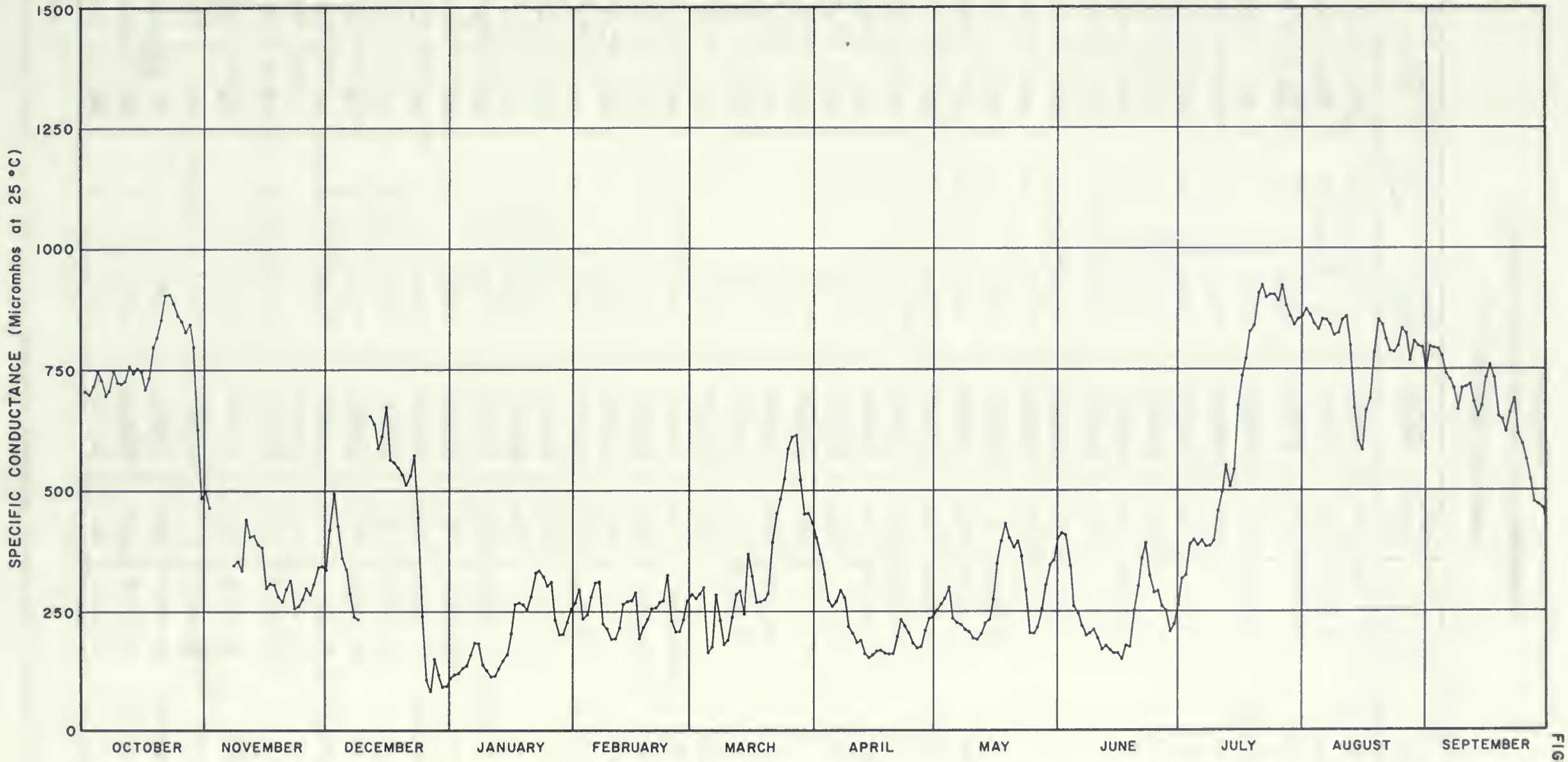
116a
23a
16d
16c
16a
27



AVERAGE DAILY SPECIFIC CONDUCTANCE – SACRAMENTO RIVER AT WALNUT GROVE (STA. 98)

OCTOBER 1964 THROUGH SEPTEMBER 1965

FIGURE D-3



AVERAGE DAILY SPECIFIC CONDUCTANCE – SAN JOAQUIN RIVER NEAR VERNALIS (STA. 27)

OCTOBER 1964 THROUGH SEPTEMBER 1965

FIGURE D-4

TABLE D-1

SAMPLING STATION DATA AND INDEX

CENTRAL VALLEY REGION (NO. 5)

Station		Station Number	Location MDB & M	Period of Record [a]	Frequency of Sampling [b]	Sampled by	Analysis on page
American River, Middle Fork near Auburn	A7 310.00	22b	12N/9E-6	7-58	B	DWR	19, 102
American River at Nimbus Dam	A7 1110.00	22a	9N/7E-16	11-58	M	DWR	20,100,102
American River at Sacramento	A0 7140.00	22	8N/5E-3	4-51 9-62	M A	DWR DWR	21,100,102
American River, South Fork near Lotus	A7 4150.00	22c	11N/9E-11	7-58	B	DWR	22,102
Antelope Creek near Mouth		88c	26N/2W-17	10-58	M	DWR	23
Antelope Creek near Cottonwood		88e	27N/2W-8	10-58	M	DWR	24
Battle Creek near Cottonwood		88b	29N/2W-6	4-58	M	DWR	25
Bear River near Wheatland	A0 6550.00	78	13N/5E-3	12-51	M	DWR	26,100,103
Big Chico Creek at Chico		85a	22N/1E-28	1-59	M	DWR	27
Big Chico Creek near Chico		85	22N/2E-9	7-52	M	DWR	28
Butte Creek near Chico		84	22N/2E-36	7-52	M	DWR	29
Cache Creek near Capay	A8 1120.00	80	10N/2W-8	12-51	M	DWR	30,100,103
Calaveras River below Hogan Dam	B2 5300.00	16c	3N/10E-1	1-64	M	CE	31, 103
Calaveras River above Hogan Reservoir	B2 5898.50	16d	4N/11E-13	1-64	M	CE	32,104
Calaveras River at Jenny Lind	B0 2590.00	16d	3N/10E-27	4-51	M	DWR	33,104
Calaveras River near Stockton	B0 2520.00	16b	2N/6E-26	7-58	M	DWR	34,100,104
Clear Creek near Igo		12d	31N/6W-27	8-58	M	DWR	35
Colusa Trough near Colusa		87	16N/2W-35	7-62	M.	DWR	36
Cosumnes River at McConnell	B0 1125.00	94a	6N/6E-20	7-58	B	DWR	37,100,104
Cosumnes River at Michigan Bar	B1 1150.00	94	8N/8E-36	7-52	B	DWR	38,100,105
Cootonwood Creek near Cottonwood		12b	29N/3W-7	4-51	M	DWR	39
Cottonwood Creek below North Fork Cottonwood Creek		11a	29N/6W-2	8-58	M	DWR	40
Cottonwood Creek, South Fork above Cottonwood Creek		11b	29N/4W-17	11-58	M	DWR	41
Cow Creek near Millville		88a	31N/3W-32	8-58	M	DWR	42
Delta Cross Channel near Walnut Grove	B9 1700.00	98	5N/4E-35	9-52	M	DWR	43,100,105
Elder Creek at Gerber		95a	25N/3W-2	1-59	M	DWR	44
Elder Creek near Paskenta		13a	25N/6W-14	10-58	M	DWR	45
Feather River, Middle Fork near Merrimac	A5 5100.00	19b	21N/6E-2	7-63	M	DWR	46, 105
Feather River at Nicolaus	A0 5103.00	20	12N/3E-12	4-51	M	DWR	47,100,105
Feather River, North Fork at Big Bar	A5 3140.00	19a	23N/5E-32	7-63	M	DWR	48,106
Feather River near Oroville	A5 1140.00	19	19N/4E-2	4-51	M	DWR	49,100,106
Feather River below Shanghai Bend	A0 5120.00	20a	14N/3E-11	7-58	M	DWR	50,106
Feather River at Sutter Butte Canal, near Gridley			19N/3E-33	7-56	Continuous	DWR	125
Feather River, South Fork below Ponderosa Dam	A5 6080.00	19c	20N/6E-33	7-56	M	DWR	51,107
Feather River, West Branch, near Yankee Hill	A5 2100.00	19d		10-64	M	DWR	52,107
Feather River, at Yuba City	A0 5135.00		15N/3E-23	7-64	Continuous	DWR	135
Grant Line Canal at Tracy Road Bridge	B9 5300.00	103a	1S/5E-29	7-58	M	DWR	53,107
Indian Creek near Crescent Mills	A5 4320.00	17d	26N/9E-25	4-51	B	DWR	54,107
Indian Slough near Brentwood	B9 5241.20	107	1N/3E-23	9-52	M	DWR	55,108

a Beginning of record

b M-Monthly, B-Bimonthly, Q-Quarterly, S-Semiannually, A-Annually, I-Irregular

TABLE D-1

SAMPLING STATION DATA AND INDEX

CENTRAL VALLEY REGION (NO. 5)

Station		Station Number	Location MDB & M	Period of Record [a]	Frequency of Sampling [b]	Sampled by	Analysis on page
Italian Slough, at Mouth, near Byron	B9 5270.20	106	1S/4E-7	9-52	M	DWR	56,108
Little Potato Slough at Terminous	B9 4120.10	99	3N/4E-13	9-52	B	DWR	57,108
McCloud River above Shasta Lake		18	36N/3W-31	4-51	M	DWR	58
Mill Creek near Mouth		88	25N/2W-9	7-52	M	DWR	58
Mokelumne River below Camanche Dam	B2 1170.00	23a	4N/10E-4	4-51	B	DWR	60,108
Molelumne River at Woodbridge	B9 4300.00	23	4N/6E-34	4-51	B	DWR	61,100,109
Old River at Clifton Court Ferry	B9 5340.00	104	1S/4E-20	9-52	M	DWR	62,109,134
Old River at Mandeville Island	B9 5110.20	112	2N/4E-6	12-54	M	DWR	63,100,109
Old River at Orwood Bridge	B9 5320.20	108	1N/4E-17	9-52	M	DWR	64,109
Old River near Tracy	B9 5380.00	103	2S/5E-6	10-52	M	DWR	65,110
Paynes Creek near Red Bluff		88g	28N/2W-3	10-58	M	DWR	66
Pit River near Canby		17a	41N/9E-10	4-51	M	DWR	67,100
Pit River near Mongomery Creek		17	35N/1E-32	4-51	M	DWR	68
Pit River, South Fork near Likely		18a	39N/13E-11	8-58	M	DWR	69
Red Bank Creek near Red Bluff		88d	26N/5W-22	1-59	M	DWR	70
Rock Slough near Knightsen	B9 5220.00	109	2N/3E-33	9-52	M	DWR	71,110
Sacramento River at Bend		12c	28N/3W-20	5-55	M	DWR	72,100
Sacramento River at Butte City		87a	19N/1W-32	5-55	M	DWR	73
Sacramento River at Colusa		13a	19N/1W-32	10-58	M	DWR	74,100
Sacramento River above Colusa Trough		14b	11N/2E-14	7-60	M	DWR	75,100
Sacramento River at Delta		11	36N/5W-35	4-51	M	DWR	76
Sacramento River at Freeport	B9 1850.00	15b	7N/4E-14	6-60	M	DWR	77,100,110
Sacramento River at Fremont Weir	A0 2170		1N/3E-32	6-65		DWR	139
Sacramento River near Hamilton City		13	22N/1W-20	4-51	M	DWR	78,100
Sacramento River at Keswick		12	32N/5W-28	4-51	M	DWR	79,101
Sacramento River near Mount Shasta	A2 1600.00		40N/4W-33	5-65	Continuous	DWR	140
Sacramento River at Rio Vista	B9 1210.00	16	4N/3E-30	4-51	M	DWR	80,101,111
Sacramento River at Sacramento Weir	A0 2105		9N/4E-29	11-64		DWR	141
Sacramento River at Walnut Grove			5N/4E-35	12-60	Continuous	DWR	14,142
Sacramento Slough near Knights Landing		14a	11N/3E-21	6-51	M	DWR	81
San Joaquin River at Antioch	B9 5020	28	2N/2E-18	4-51	M	DWR	82,101,111
San Joaquin River at Garwood Bridge	B9 5710.00	101	1N/6E-16	9-52	M	DWR	83, 112
San Joaquin River at Mossdale	B9 5820.00	102	2N/6E-4	9-52	M	DWR	84,112
San Joaquin River near Vernalis		27	3S/6E-13	12-61	Continuous	DWR	15
Stockton Ship Channel on Rindge Island	B9 5620.00	100	2N/5E-28	9-52	M	DWR	85,112,144
Stony Creek below Black Butte Dam		13c	23N/4W-28	8-57	M	DWR	86,104
Stony Creek near Fruto		13f	21N/6W-15	10-60 to 2-64 3-64	M M	USGS DWR	87
Thomes Creek near Mouth		95b	25N/3W-35	1-59	M	DWR	88
Thomas Creek near Paskenta		13d	23N/6W-4	10-58	M	DWR	89

a Beginning of record

b M-Monthly, B-Bimonthly, Q-Quarterly, S-Semiannually, A-Annually, I-Irregular

TABLE D-1

SAMPLING STATION DATA AND INDEX

CENTRAL VALLEY REGION (NO.5)

Station		Station Number	Location MDB & M	Period of Record [a]	Frequency of Sampling [b]	Sampled by	Analysis on page
Yuba River at Marysville	A0 6120.00	21	15N/4E-18	4-51	B	DWR	90,101,112
Yuba River near Smartville	A6 1100.00	21a	16N/6E-20	4-51	B	DWR	91,113
		LAHONTAN REGION (NO. 6)					
Carson River, East Fork near Markleeville	G8 3420.00	115	10N/20E-27	9-58	B	DWR	92,114
Carson Rive, West Fork at Woodfords	G8 2300.00	115a	11N/19E-34	8-58	B	DWR	93,114
Lake Tahoe at Tahoe	G7 1710.00	38	15N/17E-7	4-51	B	DWR	94, 101, 114
Susan River at Susanville		17b	30N/12E-31	4-51	M	DWR	95
Truckee River near Truckee	G7 1600.00	52	17N/16E-28	4-51	B	DWR	97, 114
Truckee River near Farad	G7 1195.00	53	18N/17E-12	4-51	M	DWR	96, 101, 114
Walker River, East near Bridgeport	G9 3200.00	116a	6N/25E-34	8-58	B	DWR	98, 115
Walker River, West near Coleville	G9 2400.00	116	6N/23E-9	8-58	B	DWR	99, 115

a Beginning of record

b M-Monthly, B-Bimonthly, Q-Quarterly, S-Semiannually, A-Annually, I-Irregular

TABLE D-2

MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. / Q	DO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
A73100.00 AMERICAN RIVER, MIDDLE FORK, NEAR AUBURN (22b)																				
A73100.00		5.45	11.0	51.0F	7.3	92	--	--	4.0	--	0.0	30	--	3.8	--	--	.0	--	--	34
11/12/64	5000	150	101		7.3				.17		.00	.49		.11						10
0945																				
A73100.00		10.13	12.3	46.0F	7.8	64	--	--	3.3	--	0.0	29	--	2.0	--	--	.0	--	--	26
01/14/65	5000	4480	105		7.1				.14		.00	.48		.06						2
0945																				
A73100.00		7.93	11.8	53.0F	7.7	61	--	--	2.4	--	0.0	28	--	1.3	--	--	.0	--	--	23
03/15/65	5000	2000	111		7.3				.10		.00	.46		.04						0
1300																				
A73100.00		9.40e	11.1	59.0F	7.3	42	5.0	0.9	1.8	0.2	0.0	21	2.0	0.8	0.3	--	.0	12	38	16
05/14/65	5000		112		7.3		.25	.07	.08	.01	.00	.34	.04	.02	.00				33	0
1215							61	17	20	2		85	10	5						
A73100.00		6.95	8.6	69.0F	8.1	90	--	--	3.5	--	0.0	40	--	2.7	--	--	.0	--	--	34
07/13/65	5000		97		7.7				.15		.00	.66		.08						1
0805																				
A73100.00		6.33	8.3	71.0F	7.9	123	15	2.8	3.2	2.5	0.0	60	6.0	3.3	0.2	--	.0	12	77	60
09/02/65	5000		96		7.7		.75	.23	.14	.06	.00	.98	.12	.09	.00				74	11
0745							64	19	12	5		82	10	8						

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. / Q	CO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
							CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
A71110.00 AMERICAN RIVER AT NIMBUS DAM (22a)																				
A71110.00		1.72	8.6	69.0F	7.6	56	--	--	2.8	--	0.0	27	--	1.4	--	--	.0	--	--	22
10/06/64	5000	1470	95		7.1				.12		.00	.44		.04						0
1230																				
A71110.00		7.50	8.5	55.0F	7.3	62	--	--	3.4	--	0.0	28	--	1.6	--	--	.0	--	--	24
11/12/64	5000	15380	80		7.1				.15		.00	.46		.05						1
0845																				
A71110.00			9.4	51.0F	7.8	74	--	--	3.1	--	0.0	32	--	2.8	--	--	.0	--	--	28
12/15/64	5000		84		7.1				.13		.00	.52		.08						2
0815																				
A71110.00			13.7	50.0F	7.4	57	--	--	2.6	--	0.0	25	--	0.8	--	--	.1	--	--	22
01/06/65	5000		120		7.1				.11		.00	.41		.02						2
0815																				
A71110.00			12.7	47.0F	7.6	59	--	--	2.5	--	0.0	27	--	1.3	--	--	.0	--	--	23
02/01/65	5000		108		7.1				.11		.00	.44		.04						1
1315																				
A71110.00		4.35	11.8	51.0F	7.8	60	--	--	2.4	--	0.0	28	--	1.3	--	--	.0	--	--	24
03/01/65	5000	5960	106		7.2				.10		.00	.46		.04						1
1500																				
A71110.00		3.20	11.4	53.0F	7.5	64	--	--	2.8	--	0.0	30	--	1.5	--	--	.0	--	--	25
04/13/65	5000	3580	105		7.1				.12		.00	.49		.04						1
1000																				
A71110.00		5.27	12.2	52.0F	7.4	61	6.6	1.8	2.2	0.9	0.0	28	3.0	1.3	2.1	--	.0	13	47	24
05/05/65	5000	8176	111		7.1		.33	.15	.10	.02	.00	.46	.06	.04	.03				45	1
0730							55	25	17	3		78	10	7	5					
A71110.00		3.61	10.0	63.0F	7.9	73	--	--	3.0	--	0.0	30	--	4.5	--	--	.1	--	--	28
06/14/65	5000	4360	103		7.1				.13		.00	.49		.13						4
1230																				
A71110.00		3.30	9.8	60.0F	7.7	52	--	--	2.6	--	0.0	24	--	1.7	--	--	.0	--	--	18
07/13/65	5000	3760	98		7.1				.11		.00	.39		.05						0
0950																				
A71110.00		3.46	9.0	67.0F	7.8	50	--	--	2.2	--	0.0	23	--	1.5	--	--	.0	--	--	19
08/09/65	5000	4060	97		7.1				.10		.00	.38		.04						0
1215																				
A71110.00		3.27	8.5	67.0F	7.2	50	6.8	0.6	2.0	1.1	0.0	23	2.0	1.0	0.0	--	.0	11	40	20
09/15/65	5000	3710	92		7.1		.34	.05	.09	.03	.00	.38	.04	.03	.00				36	1
0730							67	10	18	6		84	9	7						

TABLE D-2

MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME / LAB / SAMPLER	G.H. Q	CO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
A07140.00 AMERICAN RIVER AT SACRAMENTO (22)																			
A07140.00 10/06/64 5000 1330	17.71	9.5 105	69.0F	7.7 7.3	61	-- 	-- 	2.9 .13	-- 	0.0 .00	27 .44	-- 	1.6 .05	-- 	-- 	.0 	-- 	-- 	24 2
A07140.00 11/12/64 5000 0800	17.47	9.7 91	55.0F	7.4 7.1	65	-- 	-- 	3.1 .13	-- 	0.0 .00	27 .44	-- 	2.0 .06	-- 	-- 	.0 	-- 	-- 	24 2
A07140.00 12/07/64 5000 1400	17.36	10.2 95	54.0F	7.7 7.1	78	-- 	-- 	3.8 .17	-- 	0.0 .00	31 .51	-- 	3.1 .09	-- 	-- 	.1 	-- 	-- 	28 3
A07140.00 01/06/65 5000 1615	33.68	12.6 111	50.0F	7.2 7.1	56	-- 	-- 	2.3 .10	-- 	0.0 .00	25 .41	-- 	0.8 .02	-- 	-- 	.1 	-- 	-- 	21 1
A07140.00 02/01/65 5000 1415	24.88	12.0 102	47.0F	7.7 7.1	59	-- 	-- 	2.3 .10	-- 	0.0 .00	26 .43	-- 	1.5 .04	-- 	-- 	.0 	-- 	-- 	24 3
A07140.00 03/03/65 5000 0745	20.06	11.5 92	43.0F	7.8 7.1	60	-- 	-- 	2.4 .10	-- 	0.0 .00	27 .44	-- 	1.4 .04	-- 	-- 	.0 	-- 	-- 	24 2
A07140.00 04/05/65 5000 1600	18.84	11.6 107	53.0F	7.6 7.3	62	-- 	-- 	2.7 .12	-- 	0.0 .00	28 .46	-- 	1.6 .05	-- 	-- 	.0 	-- 	-- 	24 1
A07140.00 05/05/65 5000 0830	21.23	11.2 103	53.0F	7.5 7.1	62	7.2 .36 60	1.5 .12 20	2.3 .10 17	0.9 .02 3	0.0 .00	28 .46 78	3.0 .06 10	1.3 .04 7	1.7 .03 5	-- 	.0 	14 	46 46	24 1
A07140.00 06/16/65 5000 1515	17.80	9.8 102	64.0F	7.8 7.1	55	-- 	-- 	2.6 .11	-- 	0.0 .00	25 .41	-- 	1.3 .04	-- 	-- 	.0 	-- 	-- 	21 1
A07140.00 07/13/65 5000 1510	18.73	10.1 107	65.0F	7.8 7.3	49	-- 	-- 	2.8 .12	-- 	0.0 .00	22 .36	-- 	1.1 .03	-- 	-- 	.2 	-- 	-- 	18 0
A07140.00 08/09/65 5000 1315	18.94	9.6 107	70.0F	7.7 7.3	48	-- 	-- 	2.9 .13	-- 	0.0 .00	22 .36	-- 	1.0 .03	-- 	-- 	.0 	-- 	-- 	18 0
A07140.00 09/15/65 5000 0845		8.6 93	67.0F	7.2 7.1	52	7.4 .37 74	0.2 .02 4	2.1 .09 18	0.9 .02 4	0.0 .00	24 .39 80	3.0 .06 12	1.2 .03 6	0.6 .01 2	-- 	.0 	11 	40 38	20 1

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. / Q	CO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
A74150.00 AMERICAN RIVER, SOUTH FORK, NEAR LOTUS (22c)																				
A74150.00		4.45	11.4	53.0F	7.4	118	--	--	6.7	--	0.0	49	--	4.4	--	--	.1	--	--	49
11/12/64	5000	195	107		7.3				.29		.00	.80		.12						9
1115																				
A74150.00		7.93	11.8	46.0F	7.6	41	--	--	2.4	--	0.0	19	--	1.1	--	--	.1	--	--	16
01/12/65	5000	3460	101		7.0				.10		.00	.31		.03						1
1115																				
A74150.00		6.67	12.7	48.0F	7.5	38	--	--	2.3	--	0.0	18	--	1.2	--	--	.0	--	--	13
03/15/65	5000	1710	112		7.3				.10		.00	.30		.03						0
1115																				
A74150.00			11.3	58.0F	7.1	28	3.2	0.4	1.8	0.1	0.0	13	1.0	0.7	0.3	--	.0	10	25	10
05/14/65	5000		113		7.3		.16	.03	.08	.00	.00	.21	.02	.02	.00				24	0
1330							59	11	30			84	8	8						
A74150.00			10.0	65.0F	7.5	27	--	--	1.9	--	0.0	13	--	0.7	--	--	.2	--	--	9
07/01/65	5000		108		7.1				.08		.00	.21		.02						0
1415																				
A74150.00		5.46	9.8	62.0F	7.2	30	3.4	0.1	2.6	0.6	0.0	14	1.0	1.0	0.3	--	.0	7.5	29	9
09/02/65	5000	631	102		6.9		.17	.01	.11	.02	.00	.23	.02	.03	.00				23	0
0900							55	3	35	6		82	7	11						

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

ANTELOPE CREEK NEAR MOUTH (STA. 88c)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million / equivalents per million												Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by i
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	N.C. ppm			
10/7/64 1530	15	70	8.4	95	258	7.6 / 8.0	1.62[c]		19. / 0.83		0 / 0.00	102 / 1.67		21. / 0.59			0.6				34	81	0	2		USGS
11/13 1010	25	47	11.3	97	127	7.3 / 7.3	1.00[c]		6.1 / 0.27		0 / 0.00	54 / 0.89		4.5 / 0.13			0.1				21	50	6	5		
12/9 1640	5	53	9.5	88	166	7.2 / 8.1	1.34[c]		8.2 / 0.36		0 / 0.00	86 / 1.41		5.7 / 0.16			0.1				21	67	0	2		
1/14 1105	30	46	10.7	90	130	7.0 / 8.2	1.12[c]		6.2 / 0.27		0 / 0.00	67 / 1.10		3.6 / 0.10			0.0				19	56	1	4		
2/4 1715	15	49	10.2	90	164	7.2 / 8.3	1.36[c]		7.4 / 0.32		1 / 0.03	80 / 1.31		5.3 / 0.15			0.1				19	68	1	2		
3/4 1725	5	57	11.3	110	184	7.2 / 8.4	1.50[c]		/ 0.35		2 / 0.07	88 / 1.44		5.5 / 0.16			0.1				19	75	0	4		
4/8 1800	100	52	9.1	83	83	7.3 / 7.3	0.69[c]		3.8 / 0.17		0 / 0.00	43 / 0.70		1.4 / 0.04			0.0				20	34	0	15		
5/6 1015	60	50	10.2	91	110	7.2 / 7.9	10. / 0.50	3.2 / 0.26	6.8 / 0.30	1.7 / 0.04	0 / 0.00	44 / 0.72	10. / 0.21	4.6 / 0.13	2.1 / 0.03		0.1	29.	ABS 0.0 As 0.01 PO_4 0.15	90[f]	27	38	2	9		
6/2 1050	3	69	6.6	74	189	7.3 / 8.3	1.44[c]		9.4 / 0.41		2 / 0.07	74 / 1.21		8.3 / 0.23			0.2				22	72	8	6		
7/12 1340	12	74	7.6	89	200	7.4 / 8.1	1.36[c]		12. / 0.52		0 / 0.00	75 / 1.23		9.9 / 0.28			0.3				28	68	6	3		
8/9 1320	10	77	7.9	95	207	7.4 / 8.1	1.28[c]		15. / 0.65		0 / 0.00	74 / 1.21		16. / 0.45			0.4				34	64	3	8		
9/13 1030	7	63	8.6	90	227	7.4 / 7.9	16. / 0.80	8.8 / 0.72	16. / 0.70	3.2 / 0.08	0 / 0.00	86 / 1.41	17. / 0.35	17. / 0.48	0.5 / 0.01		0.5	36.	ABS 0.0 As 0.00 PO_4 0.19	169[f]	30	76	5	3		

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

ANTELOPE CREEK NEAR RED BLUFF (STA. 88c)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million / equivalents per million													Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by i
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	N.C. ppm			
10/7/64 1745	34	69	10.6	118	168	8.4 / 8.3	1.24[c]		12. / 0.52		2 / 0.07	86 / 1.41		8.4 / 0.24			0.1				30	62	0	1		USGS
11/13 0935	214	47	11.5	99	98	7.3 / 8.0	0.76[c]		5.6 / 0.24		0 / 0.00	47 / 0.77		2.8 / 0.08			0.1				24	38	0	1		
12/9 1600	58	50	10.2	91	148	7.7 / 8.2	1.09[c]		9.5 / 0.41		0 / 0.00	78 / 1.28		5.4 / 0.15			0.2				27	54	0	1		
1/14/65 1140	258	44	10.8	89	80	7.4 / 8.0	0.61[c]		4.5 / 0.20		0 / 0.00	43 / 0.70		1.8 / 0.05			0.0				25	30	0	5		
2/4 1650	154	45	10.4	87	91	7.3 / 8.0	0.68[c]		5.1 / 0.22		0 / 0.00	48 / 0.79		2.6 / 0.07			0.0				24	34	0	3		
3/4 1650	102	50	11.0	98	110	7.6 / 8.2	0.82[c]		6.0 / 0.26		0 / 0.00	61 / 1.00		3.3 / 0.09			0.0				24	41	0	1		
4/8 1700	439	51	8.8	79	78	7.2 / 7.6	0.66[c]		3.5 / 0.15		0 / 0.00	42 / 0.69		1.1 / 0.03			0.0				19	33	0	5		
5/6 0945	173	50	10.6	95	81	7.2 / 7.8	8.8 / 0.44	1.9 / 0.16	4.4 / 0.19	0.9 / 0.02	0 / 0.00	44 / 0.72	2.0 / 0.04	2.2 / 0.06	1.1 / 0.02		0.0	28.	ABS 0.0 As 0.00 PO_4 0.05	61[f]	23	30	0	4		
6/2 1210	118	62	8.6	89	107	8.1 / 8.5	0.80[c]		6.5 / 0.28		3 / 0.10	53 / 0.87		3.9 / 0.11			0.0				26	40	0	2		
7/12 1430	41	78	9.6	117	142	8.4 / 8.2	1.00[c]		11. / 0.48		0 / 0.00	75 / 1.23		7.2 / 0.20			0.0				32	50	0	1		
8/9 1405	40	80	10.3	128	150	8.4 / 8.4	1.06[c]		10. / 0.44		3 / 0.10	75 / 1.23		7.9 / 0.22			0.1				29	53	0	1		
9/13 1100	39	69	10.8	120	153	8.3 / 8.2	12. / 0.60	6.1 / 0.50	10. / 0.44	1.1 / 0.03	0 / 0.00	80 / 1.31	0.0 / 0.00	7.6 / 0.21	0.0 / 0.00		0.1	34.	ABS 0.0 As 0.00 PO_4 0.07	113[f]	28	55	0	1		

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

BATTLE CREEK NEAR COTTONWOOD (STA. 88b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$: Total ppm	Hardness as $CaCO_3$: N.C. ppm	Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by
10/8/64 0825	271	58	10.0	98	153	7.7 / 8.1	1.16[c]		8.1 / 0.35		0 / 0.00	88 / 1.44		1.9 / 0.05			0.0				23	58	0	1		USGS
11/9 1415	2100	52	10.7	98	80	7.2 / 7.3	0.56[c]		4.4 / 0.19		0 / 0.00	28 / 0.46		2.1 / 0.06			0.1				25	28	5	40		
12/10 1015	356	50	9.6	86	132	7.4 / 8.0	0.96[c]		7.1 / 0.31		0 / 0.00	74 / 1.21		1.4 / 0.04			0.0				24	48	0	3		
1/14/65 1445	806	47	10.3	88	98	7.3 / 8.2	0.76[c]		5.3 / 0.23		0 / 0.00	54 / 0.89		1.1 / 0.03			0.0				23	38	0	5		
2/1 1430	664	48	10.4	91	106	7.3 / 8.2	0.80[c]		5.8 / 0.25		0 / 0.00	60 / 0.98		1.0 / 0.03			0.0				24	40	0	4		
3/1 1330	532	50	10.2	91	113	7.8 / 8.5	0.86[c]		5.7 / 0.25		4 / 0.13	57 / 0.93		1.0 / 0.03			0.0				23	43	0	1		
4/5 1420	537	53	9.3	86	115	7.7 / 7.9	0.90[c]		6.2 / 0.27		0 / 0.00	66 / 1.08		1.3 / 0.04			0.0				23	45	0	5		
5/6 1310	658	52	9.5	87	99	7.7 / 8.0	9.6 / 0.48	3.6 / 0.30	5.3 / 0.23	2.1 / 0.05	0 / 0.00	54 / 0.89	1.0 / 0.02	1.1 / 0.03	1.4 / 0.02		0.0	37.	ABS 0.0 As 0.00 PO_4 0.10	82[f]	22	39	0	3		
6/14 1020	505	57	8.2	80	107	7.6 / 8.6	0.82[c]		5.8 / 0.25		4 / 0.13	52 / 0.85		1.2 / 0.03			0.0				23	41	0	6		
7/12 1610	380	67	8.6	94	123	7.9 / 8.2	0.92[c]		7.1 / 0.31		0 / 0.00	72 / 1.18		1.3 / 0.04			0.0				25	46	0	1		
8/13 0745	307	61	9.6	98	130	7.5 / 8.3	1.02[c]		7.4 / 0.32		1 / 0.03	72 / 1.18		1.7 / 0.05			0.0				24	51	0	5		
9/13 1315	284	59	10.3	102	142	7.6 / 8.1	8.8 / 0.44	7.8 / 0.64	8.3 / 0.36	2.0 / 0.05	0 / 0.00	84 / 1.38	3.0 / 0.06	2.0 / 0.06	0.2 / 0.00		0.0	48.	ABS 0.0 As 0.00 PO_4 0.08	124[f]	24	54	0	1		

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. G	CO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
							CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
A06550.00 BEAR RIVER NEAR WHEATLAND (78)																				
A06550.CC 10/09/64 0745	5000	Ponded	7.4 77	64.0F	8.2 7.3	269	-- 	-- 	6.6 .29	-- 	0.0 .00	124 2.03	-- 	6.8 .19	-- 	-- 	.0 	-- 	-- 	126 25
A06550.CC 11/13/64 0845	5000	2.38	10.0 91	52.0F	8.0 7.3	197	-- 	-- 	5.3 .23	-- 	0.0 .00	92 1.51	-- 	4.8 .14	-- 	-- 	.1 	-- 	-- 	84 9
A06550.CC 12/11/64 0845	5000	1.88	9.2 87	55.0F	8.3 7.4	326	-- 	-- 	7.0 .30	-- 	2.0 .07	124 2.03	-- 	7.9 .22	-- 	-- 	.0 	-- 	-- 	140 35
A06550.00 01/08/65 0900	5000	7.48	12.2 103	47.0F	7.5 7.3	70	-- 	-- 	2.3 .10	-- 	0.0 .00	27 .44	-- 	1.2 .03	-- 	-- 	.0 	-- 	-- 	28 6
A06550.00 02/05/65 0830	5000	4.19	11.7 101	48.0F	7.6 7.1	65	-- 	-- 	2.3 .10	-- 	0.0 .00	26 .43	-- 	1.3 .04	-- 	-- 	.0 	-- 	-- 	26 5
A06550.CC 03/05/65 0900	5000	3.84	11.5 106	53.0F	7.8 7.3	69	-- 	-- 	2.5 .11	-- 	0.0 .00	28 .46	-- 	1.7 .05	-- 	-- 	.0 	-- 	-- 	28 5
A06550.00 04/13/65 0845	5000	4.37	11.3 97	48.0F	7.7 7.3	77	-- 	-- 	2.7 .12	-- 	0.0 .00	30 .49	-- 	2.0 .06	-- 	-- 	.0 	-- 	-- 	30 6
A06550.CC 05/07/65 0815	5000	2.22	11.1 103	54.0F	7.8 7.3	100	9.6 .48 47	4.9 .40 39	3.3 .14 14	0.5 .01 1	0.0 .00	42 .69 70	11 .23 23	2.6 .07 7	0.2 .00	-- 	.0 	12 	62 65	44 10
A06550.CC 06/18/65 1530	5000	1.98	10.0 117	75.0F	8.5 7.5	170	-- 	-- 	4.9 .21	-- 	2.0 .07	70 1.15	-- 	4.8 .14	-- 	-- 	.0 	-- 	-- 	80 19
A06550.00 07/16/65 1430	5000	1.85	8.2 122	91.0F	8.3 8.1	242	-- 	-- 	5.6 .24	-- 	2.0 .07	102 1.67	-- 	6.6 .19	-- 	-- 	.0 	-- 	-- 	111 24
A06550.00 08/13/65 0745	5000	1.96	7.5 87	74.0F	8.3 7.3	181	-- 	-- 	4.8 .21	-- 	1.0 .03	78 1.28	-- 	4.3 .12	-- 	-- 	.0 	-- 	-- 	80 15
A06550.CC 09/17/65 0815	5000	1.86	8.0 83	63.0F	7.8 7.5	281	32 1.60 57	9.2 .76 27	10 .44 16	0.6 .02 1	0.0 .00	117 1.92 67	27 .56 20	14 .39 14	0.0 .00	-- 	.0 	24 	180 174	118 22

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

BIG CHICO CREEK AT CHICO (STA. 85a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million / equivalents per million												Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by i
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)				Total ppm	N.C. ppm			
10/5/64 1740		71	8.0	91	236	7.7 / 8.1	— / 1.56[c]		15. / 0.65		0 / 0.00	118 / 1.93		13. / 0.37			0.2				29	78	0	1		USGS
11/12 1150		52	10.5	96	134	— / 7.9	— / 0.96[c]		8.1 / 0.35		0 / 0.00	62 / 1.02		5.8 / 0.16			0.1				27	48	0	2		
12/10 0845		51	10.6	96	167	7.4 / 8.0	— / 1.18[c]		10. / 0.44		0 / 0.00	84 / 1.38		7.2 / 0.20			0.1				27	59	0	1		
1/13/65 1540		48	11.3	98	93	7.4 / 8.0	— / 0.73[c]		4.9 / 0.21		0 / 0.00	48 / 0.79		2.2 / 0.06			0.0				22	36	0	2		
2/2 1225		48	10.7	93	112	7.3 / 8.0	— / 0.88[c]		5.9 / 0.26		0 / 0.00	59 / 0.97		2.9 / 0.08			0.1				23	44	0	1		
3/2 0830		48	10.7	93	133	7.3 / 8.0	— / 1.04[c]		7.2 / 0.31		0 / 0.00	70 / 1.15		4.6 / 0.13			0.0				23	52	0	2		
4/5 1445		54	10.5	98	130	7.8 / 8.1	— / 1.00[c]		8.4 / 0.37		0 / 0.00	69 / 1.13		3.9 / 0.11			0.1				27	50	0	5		
5/3 1345		57	10.4	101	119	7.8 / 7.9	11. / 0.55	4.7 / 0.39	6.0 / 0.26	0.4 / 0.01	0 / 0.00	65 / 1.07	1.0 / 0.02	3.3 / 0.09	0.8 / 0.01		0.1	32	ABS 0.0 As 0.00 PO_4 0.00	89[f]	21	47	0	3		
6/16 1430		67	9.3	101	174	7.8 / 8.4	— / 1.32[c]		11. / 0.48		1 / 0.03	88 / 1.44		7.2 / 0.20			0.1				27	66	0	1		
7/14 1345		77	9.9	119	198	8.2 / 8.5	— / 1.46[c]		13. / 0.57		3 / 0.10	97 / 1.59		8.9 / 0.25			0.1				28	73	0	13		
8/12 1010		71	8.7	99	207	7.7 / 8.1	— / 1.48[c]		15. / 0.65		0 / 0.00	105 / 1.72		11. / 0.31			0.0				31	74	0	2		
9/15 1450		71	10.0	114	209	8.1 / 8.2	17. / 0.85	8.6 / 0.71	14. / 0.61	0.9 / 0.02	0 / 0.00	110 / 1.80	5.0 / 0.10	10. / 0.28	0.3 / 0.06		0.2	36.	ABS 0.0 As 0.00 PO_4 0.06	150[f]	28	78	0	1		

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

BIG CHICO CREEK NEAR CHICO (STA. 85)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/ b/	Mineral constituents in parts per million / equivalents per million													Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform h/ MPN/ml	Analyzed by i/
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	N.C. ppm			
10/6/64 0825	20	65	9.4	100	225	8.0 / 8.3	1.60 c/		15. / 0.65		2 / 0.07	110 / 1.80		12. / 0.34			0.2				29	80	0	1	Median 1450	USGS
11/12 1100	300	50	11.3	101	96	- / 7.5	0.70 c/		5.2 / 0.23		0 / 0.00	46 / 0.75		3.0 / 0.08			0.1				25	35	0	2	Maximum 2400	
12/9 1550	66	50	11.3	101	163	7.6 / 8.1	1.20 c/		10. / 0.44		0 / 0.00	82 / 1.34		7.4 / 0.21			0.1				27	60	0	1	Minimum 12.	
1/13/65 1315	435	41	11.9	94	77	7.5 / 8.0	0.62 c/		3.8 / 0.17		0 / 0.00	40 / 0.66		1.6 / 0.05			0.1				22	31	0	2		
2/2 1440	208	46	11.8	100	96	7.3 / 7.9	0.76 c/		5.0 / 0.22		0 / 0.00	50 / 0.82		2.1 / 0.06			0.1				22	38	0	1		
3/1 1430	106	49	11.4	100	123	7.1 / 8.0	0.98 c/		6.0 / 0.26		0 / 0.00	66 / 1.08		3.8 / 0.11			0.0				21	49	0	2		
4/5 1520	97	52	11.0	100	128	8.0 / 8.1	1.00 c/		7.7 / 0.33		0 / 0.00	68 / 1.11		3.9 / 0.11			0.1				25	50	0	3		
5/3 1445	134	54	10.7	100	118	7.7 / 7.8	11. / 0.55	4.7 / 0.39	6.0 / 0.26	0.4 / 0.01	0 / 0.00	65 / 1.07	1.0 / 0.02	2.8 / 0.08	1.3 / 0.02		0.0	32.	ABS 0.0 As 0.00 PO_4 0.00	87 f/	21	47	0	3		
6/16 1615	41	64	9.4	99	171	8.0 / 8.5	1.32 c/		10. / 0.44		4 / 0.13	82 / 1.34		6.6 / 0.19			0.0				25	66	0	1		
7/14 1600	29	72	8.4	96	190	8.1 / 8.4	1.40 c/		12. / 0.52		2 / 0.07	95 / 1.56		8.1 / 0.23			0.1				27	70	0	1		
8/12 0900	61	68	9.5	105	193	8.0 / 8.4	1.44 c/		12. / 0.52		4 / 0.13	92 / 1.51		8.2 / 0.23			0.0				27	72	0	1		
9/16 0730	25	65	9.1	97	201	7.9 / 8.2	16. / 0.80	8.3 / 0.68	14. / 0.61	1.1 / 0.03	0 / 0.00	106 / 1.74	5.0 / 0.10	10. / 0.28	0.1 / 0.00		0.1	38.	ABS 0.0 As 0.00 PO_4 0.09	138 f/	29	74	0	1		

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

BUTTE CREEK NEAR CHICO (STA. 84)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by i
10/6/64 0740	115	58	9.7	95	111	7.5 / 7.8	—[c] / 1.00		3.7 / 0.16		0 / 0.00	67 / 1.10		0.5 / 0.01			0.0				14	50	0	1		USGS
11/12 1015	528	47	11.4	98	93	- / 7.9	—[c] / 0.80		4.4 / 0.19		0 / 0.00	54 / 0.89		0.6 / 0.02			0.0				19	40	0	30		
12/9 1505	210	48	11.6	101	103	7.5 / 8.1	—[c] / 0.90		4.1 / 0.18		0 / 0.00	61 / 1.00		0.6 / 0.02			0.0				17	45	0	3		
1/14/65 0900	1060	44	11.9	98	65	7.2 / 8.0	—[c] / 0.57		3.0 / 0.13		0 / 0.00	36 / 0.59		0.8 / 0.02			0.0				19	28	0	10		
2/2 1330	762	45	11.7	98	68	7.3 / 7.7	—[c] / 0.57		2.6 / 0.11		0 / 0.00	37 / 0.61		0.4 / 0.01			0.0				16	28	0	2		
3/1 1335	494	48	10.8	94	73	7.3 / 7.8	—[c] / 0.63		2.6 / 0.11		0 / 0.00	40 / 0.66		0.9 / 0.03			0.0				15	32	0	2		
4/5 1600	501	51	10.9	98	73	7.0 / 7.6	—[c] / 0.64		2.9 / 0.13		0 / 0.00	41 / 0.67		0.4 / 0.01			0.0				17	32	0	2		
5/3 1530	676	52	10.8	99	66	7.4 / 7.5	7.2 / 0.36	2.4 / 0.20	2.4 / 0.10	0.4 / 0.01	0 / 0.00	37 / 0.61	0.0 / 0.00	0.8 / 0.02	2.1 / 0.03		0.0	21	ABS 0.0 As 0.00 PO_4 0.00	51[f]	15	28	0	11		
6/16 1515	930	61	9.5	97	82	7.5 / 8.3	—[c] / 0.71		3.1 / 0.13		2 / 0.07	43 / 0.70		0.6 / 0.02			0.0				15	36	0	10		
7/14 1500	198	70	8.6	97	95	7.6 / 8.2	—[c] / 0.82		3.7 / 0.16		0 / 0.00	55 / 0.90		0.3 / 0.01			0.0				16	41	0	1		
8/12 0800	335	64	9.2	97	105	7.4 / 8.2	—[c] / 0.92		4.6 / 0.20		0 / 0.00	60 / 0.98		0.8 / 0.02			0.0				18	46	0	9		
9/15 1550	143	64	9.8	103	104	7.3 / 8.3	12. / 0.60	3.9 / 0.32	3.5 / 0.15	0.5 / 0.01	1 / 0.03	62 / 1.02	0.0 / 0.00	0.6 / 0.02	0.1 / 0.00		0.0	21.	ABS 0.0 As 0.00 PO_4 0.06	79[f]	14	46	0	1		

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. / Q	CO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
A81120.00 CACHE CREEK NEAR CAPAY (80)																				
A81120.00		1.11	6.3	71.0F	8.6	701	--	--	52	--	16	264	--	72	--	--	1.9	--	424	244
10/07/64	5000	12	72		8.1				2.26		.53	4.33		2.03						1
1345																				
A81120.00		3.54	9.4	54.0F	8.4	1210	--	--	144	--	10	288	--	215	--	--	4.7	--	726	274
11/10/64	5000	429	88		8.3				6.26		.33	4.72		6.06						22
0935																				
A81120.00		1.98	11.4	56.0F	8.6	733	--	--	66	--	13	225	--	98	--	--	4.8	--	--	219
12/08/64	5000	84	110		8.1				2.87		.43	3.69		2.76						13
1445																				
A81120.00		8.66	11.2	48.0F	8.2	294	--	--	15	--	0.0	150	--	11	--	--	.7	--	--	122
01/04/65	5000	5100	97		8.1				.65		.00	2.46		.31						0
0930																				
A81120.00		5.87	10.7	49.0F	8.2	360	--	--	19	--	0.0	188	--	15	--	--	1.0	--	--	152
02/02/65	5000	1750	94		8.1				.83		.00	3.08		.42						0
0915																				
A81120.00		3.27	11.0	52.0F	8.5	667	--	--	47	--	15	255	--	60	--	--	1.5	--	--	252
03/02/65	5000	346	101		8.3				2.04		.50	4.18		1.69						18
0915																				
A81120.00		2.89	10.3	56.0F	8.5	706	--	--	55	--	8.0	275	--	67	--	--	1.9	--	400	257
04/06/65	5000	248	99		8.2				2.39		.27	4.51		1.89						18
0900																				
A81120.00		3.48	9.9	58.0F	8.4	462	33	24	29	1.4	4.0	212	24	29	3.0	--	1.2	23	262	182
05/03/65	5000	409	98		8.1		1.65	1.97	1.26	.04	.13	3.48	.50	.82	.05				275	2
0800							34	40	26	1	3	70	10	16	1					
A81120.00		3.83	9.0	64.0F	8.7	338	--	--	18	--	12	154	--	17	--	--	1.0	--	192	141
06/15/65	5000	532	95		8.1				.78		.40	2.53		.48						0
0800																				
A81120.00			8.5	--	8.6	315	--	--	16	--	7.0	156	--	12	--	--	.9	--	179	132
07/14/65	5000				8.5				.70		.23	2.56		.34						0
1730																				
A81120.00		3.58	7.6	77.0F	8.5	312	--	--	15	--	6.0	162	--	11	--	--	.8	--	171	135
08/10/65	5000	442	92		8.2				.65		.20	2.66		.31						0
0815																				
A81120.00		3.03	8.5	67.0F	7.8	361	30	18	20	2.3	0.0	186	10	18	3.7	--	1.0	28	224	148
09/13/65	5000	282	93		8.1		1.50	1.48	.87	.06	.00	3.05	.21	.51	.06				222	0
0800							38	38	22	2		80	5	13	2					

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME / LAB / SAMPLER	G.H. / Q	DO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
B25300.00 CALAVERAS RIVER BELOW NEW HOGAN DAM (16c)																			
825300.00 11/02/64 5000 1315		12.4 126	60.0F	8.2	600	-- 	-- 	24 1.04	-- 	0.0 .00	193 3.17	-- 	29 .82	-- 	-- 	.3 	-- 	-- 	263 105
825300.00 12/01/64 5000 1125		11.6 113	56.0F	8.3	614	-- 	-- 	23 1.00	-- 	2.0 .07	193 3.17	-- 	28 .79	-- 	-- 	.6 	-- 	-- 	261 99
825300.00 02/02/65 5000 1515	1.51 150	12.5 110	48.0F	7.9	132	-- 	-- 	4.2 .18	-- 	0.0 .00	58 .95	-- 	2.6 .07	-- 	-- 	.1 	-- 	-- 	56 9
825300.00 03/01/65 5000 1500	1.11 60	13.8 138	58.0F	8.0	136	-- 	-- 	4.1 .18	-- 	0.0 .00	60 .98	-- 	2.9 .08	-- 	-- 	.0 	-- 	-- 	57 8
825300.00 04/05/65 5000 1435	1.05	11.6 110	54.0F	8.0	143	-- 	-- 	4.6 .20	-- 	0.0 .00	64 1.05	-- 	3.0 .08	-- 	-- 	.0 	-- 	-- 	61 9
825300.00 05/04/65 5000 0800	1.38	12.2 113	52.0F	7.8	147	18 .90 59	4.6 .38 25	4.6 .20 13	1.9 .05 3	0.0 .00	70 1.15 77	11 .23 15	2.8 .08 5	2.5 .04 3	-- 	.1 	16 	100 96	64 7
825300.00 06/14/65 5000 0800	1.60 225	13.5 130	55.0F	8.2	145	-- 	-- 	4.1 .18	-- 	0.0 .00	69 1.13	-- 	3.4 .10	-- 	-- 	.1 	-- 	-- 	62 6
825300.00 07/12/65 5000 1000	1.72	13.5 131	56.0F	7.9	147	-- 	-- 	4.7 .20	-- 	0.0 .00	70 1.15	-- 	2.8 .08	-- 	-- 	.0 	-- 	-- 	64 7
825300.00 08/09/65 5000 0720	1.63 200	12.0 122	60.0F	8.2	149	-- 	-- 	4.5 .20	-- 	0.0 .00	73 1.20	-- 	3.0 .08	-- 	-- 	.0 	-- 	-- 	65 5
825300.00 09/13/65 5000 0835	1.36 98	13.5 135	58.0F	8.2	152	18 .90 57	5.1 .42 27	4.5 .20 13	1.9 .05 3	0.0 .00	73 1.20 79	8.0 .17 11	3.1 .09 6	2.8 .05 3	-- 	.0 	18 	99 97	66 6

TABLE D-2

MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME / LAB / SAMPLER	G.H. Q	CO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
B2 5898.50 CALAVERAS RIVER ABOVE HOGAN RESERVOIR (16d)																			
B25898.50 11/02/64 5000 1430			60.0F	7.9	326	-- 	-- 	11 .48	-- 	0.0 .00	113 1.85	-- 	16 .45	-- 	--	.0	--	--	131 39
B25898.50 12/01/64 5000 1345			56.0F	8.4	263	-- 	-- 	9.1 .40	-- 	2.0 .07	111 1.82	-- 	9.9 .28	-- 	--	.2	--	--	111 17
B25898.50 01/05/65 5000 0900			50.0F	7.7	108	-- 	-- 	4.3 .19	-- 	0.0 .00	46 .75	-- 	1.8 .05	-- 	--	.1	--	--	42 5
B25898.50 02/01/65 5000 1445			50.0F	8.2	153	-- 	-- 	5.1 .22	-- 	0.0 .00	72 1.18	-- 	3.4 .10	-- 	--	.0	--	--	66 7
B25898.50 03/01/65 5000 1400			56.0F	7.7	174	-- 	-- 	5.2 .23	-- 	0.0 .00	82 1.34	-- 	4.2 .12	-- 	--	.0	--	--	76 9
B25898.50 04/05/65 5000 1400			54.0F	8.0	168	-- 	-- 	6.0 .26	-- 	0.0 .00	84 1.38	-- 	3.9 .11	-- 	--	.0	--	--	72 3
B25898.50 05/04/65 5000 0820			56.0F	7.5	178	22 1.10 60	5.4 .44 24	5.9 .26 14	1.7 .04 2	0.0 .00	87 1.43 78	13 .27 15	3.8 .11 6	1.1 .02 1	--	.0	22	126 118	77 6
B25898.50 06/14/65 5000 0900			--	8.3	209	-- 	-- 	6.8 .30	-- 	2.0 .07	99 1.62	-- 	4.2 .12	-- 	--	.2	--	--	91 7
B25898.50 07/12/65 5000 0900			67.0F	8.5	227	-- 	-- 	8.2 .36	-- 	2.0 .07	112 1.84	-- 	5.8 .16	-- 	--	.0	--	--	100 5
B25898.50 08/09/65 5000 0830			72.0F	8.4	244	-- 	-- 	8.6 .37	-- 	3.0 .10	116 1.90	-- 	7.8 .22	-- 	--	.1	--	--	106 6
B25898.50 09/13/65 5000 0725			64.0F	8.2	249	28 1.40 53	9.0 .74 28	9.4 .41 16	2.8 .07 3	0.0 .00	121 1.98 77	17 .35 14	8.6 .24 9	0.4 .01	--	.0	22	157 156	107 8

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME / LAB / SAMPLER	G.H. Q	CO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
B02590.00 CALAVERAS RIVER AT JENNY LIND (16a)																			
B02590.00	0.75	5.8	53.0F	7.7	325	--	--	11	--	0.0	80	--	15	--	--	.2	--	--	132
11/16/64 5000	2.0	54		7.1				.48		.00	1.31		.42						67
1130																			
B02590.00		4.2	55.0F	8.2	358	--	--	9.6	--	0.0	101	--	13	--	--	.4	--	--	146
12/01/64 5000		40		6.9				.42		.00	1.66		.37						63
0930																			
B02590.00	5.26	7.3	51.0F	7.8	134	--	--	4.6	--	0.0	58	--	2.0	--	--	.1	--	--	56
01/11/65 5000	1520	66		7.3				.20		.00	.95		.06						9
1300																			
B02590.00	2.79	11.4	49.0F	7.7	141	--	--	4.1	--	0.0	63	--	3.1	--	--	.0	--	--	62
02/08/65 5000	247	100		7.3				.18		.00	1.03		.09						11
0930																			
B02590.00	1.80	12.1	53.0F	8.1	166	--	--	5.1	--	0.0	76	--	4.1	--	--	.0	--	--	71
03/01/65 5000	49	112		8.3				.22		.00	1.25		.12						9
1045																			
B02590.00	1.94	10.6	55.0F	7.6	153	--	--	4.8	--	0.0	68	--	3.4	--	--	.0	--	--	67
04/01/65 5000	66	101		7.7				.21		.00	1.12		.10						11
0930																			
B02590.00	2.42	12.5	59.0F	7.6	142	16	5.6	4.0	1.3	0.0	68	10	2.8	2.1	--	.0	12	90	63
05/18/65 5000	145	125		8.3		.80	.46	.17	.03	.00	1.12	.21	.08	.03				87	7
1145						55	32	12	2		78	15	6	2					
B02590.00	2.53	11.0	56.0F	8.2	147	--	--	4.6	--	0.0	70	--	3.0	--	--	.0	--	--	64
06/10/65 5000	173	106		7.7				.20		.00	1.15		.08						7
0845																			
B02590.00	2.37	12.0	57.0F	8.2	146	--	--	4.5	--	0.0	70	--	3.0	--	--	.0	--	--	64
07/01/65 5000	134	117		8.3				.20		.00	1.15		.08						7
1000																			
B02590.00	2.49	10.7	59.0F	8.2	148	--	--	4.2	--	0.0	72	--	3.1	--	--	.1	--	--	65
08/02/65 5000	162	107		7.7				.18		.00	1.18		.09						6
0915																			
B02590.00	2.36	10.7	60.0F	7.7	150	17	5.5	4.1	1.9	0.0	73	8.0	2.9	2.0	--	.0	15	99	65
09/02/65 5000	126	108		7.9		.85	.45	.18	.05	.00	1.20	.17	.08	.03				92	5
1300						56	29	12	3		81	11	5	2					

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME / LAB / SAMPLER	G.H. Q	DO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
B02520.00 CALAVERAS RIVER AT STOCKTON (16b)																			
B02520.00 01/06/65 5000 1330		9.6 88	53.0F	6.5 7.3	112	--	--	5.5 .24	--	0.0 .00	44 .72	--	3.8 .11	--	--	.1	--	--	39 3
B02520.00 02/17/65 5000 1015		12.3 109	50.0F	7.8 8.1	143	--	--	4.7 .20	--	0.0 .00	65 1.07	--	3.3 .09	--	--	.0	--	--	60 7
B02520.00 03/11/65 5000 1030		10.4 99	56.0F	7.9 8.1	178	--	--	5.3 .23	--	0.0 .00	77 1.26	--	4.9 .14	--	--	.0	--	--	76 13
B02520.00 04/01/65 5000 1030		11.3 115	62.0F	8.0 8.8	165	--	--	5.5 .24	--	0.0 .00	76 1.25	--	4.2 .12	--	--	.0	--	--	71 9
B02520.00 06/10/65 5000 1000		9.4 107	72.0F	8.2 8.1	150	--	--	5.4 .23	--	0.0 .00	73 1.20	--	3.3 .09	--	--	.1	--	--	65 5
B02520.00 07/02/65 5000 1230		10.1 126	81.0F	8.2 8.7	151	--	--	4.7 .20	--	0.0 .00	74 1.21	--	3.1 .09	--	--	.0	--	--	66 6
B02520.00 08/02/65 5000 1130		9.1 113	81.0F	8.3 8.1	160	--	--	5.1 .22	--	1.0 .03	77 1.26	--	3.7 .10	--	--	.0	--	--	70 6
B02520.00 09/02/65 5000 1415		13.3 160	77.0F	7.6 8.3	148	19 .95 63	4.0 .33 22	4.3 .19 13	1.4 .04 3	0.0 .00	74 1.21 79	9.0 .19 12	3.6 .10 7	2.0 .03 2	--	.0	14	95 94	64 4

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

CLEAR CREEK NEAR IGO (STA. 12d)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25° C)	pH a/b	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by i
							equivalents per million: (Ca)	(Mg)	(Na)	(K)	(CO_3)	(HCO_3)	(SO_4)	(Cl)	(NO_3)	(F)	(B)	(SiO_2)								
10/8/64 1200	56	55	11.0	105	99	7.9 / 7.9	0.94[c]		2.8 / 0.12		0 / 0.00	55 / 0.90		2.0 / 0.06			0.1				11	47	2	1		USGS
11/13 1320	143	48	12.0	105	99	7.4 / 7.9	0.82[c]		3.9 / 0.17		0 / 0.00	46 / 0.75		2.6 / 0.07			0.0				17	41	3	2		
12/10 1240	113	49	10.7	95	102	7.4 / 7.8	—[c]		3.9 / 0.17		0 / 0.00	53 / 0.87		2.0 / 0.06			0.0				17	43	0	2		
1/15/65 1100	170	45	12.2	103	73	7.2 / 7.7	0.52[c]		4.3 / 0.19		0 / 0.00	35 / 0.57		1.5 / 0.04			0.0				27	26	0	15		
2/5 1215	128	45	11.7	99	80	7.3 / 7.5	0.60[c]		4.4 / 0.19		0 / 0.00	36 / 0.59		2.1 / 0.06			0.0				24	30	0	20		
3/5 1220	77	47	10.0	87	87	7.3 / 8.2	0.70[c]		3.8 / 0.17		0 / 0.00	40 / 0.66		1.7 / 0.05			0.1				20	35	2	15		
4/9 1225	398	48	10.9	96	71	7.3 / 7.4	0.53[c]		4.2 / 0.18		0 / 0.00	32 / 0.52		1.3 / 0.04			0.0				25	26	0	15		
5/6 1555	97	54	10.2	97	89	7.6 / 7.8	8.0 / 0.40	3.9 / 0.32	4.1 / 0.18	0.4 / 0.01	0 / 0.00	42 / 0.69	5.0 / 0.10	2.4 / 0.07	0.8 / 0.01		0.0	17	ABS 0.0 As 0.00 PO_4 0.05	66[f]	20	36	2	7		
6/11 1250	61	58	10.3	102	91	7.7 / 8.2	0.78[c]		3.3 / 0.14		0 / 0.00	45 / 0.74		2.3 / 0.06			0.0				15	39	2	8		
7/12 0840	52	58	9.6	95	93	7.6 / 8.1	0.81[c]		3.2 / 0.14		0 / 0.00	47 / 0.77		1.7 / 0.05			0.0				15	40	1	10		
8/9 0830	51	59	10.0	101	96	7.7 / 8.1	0.86[c]		2.9 / 0.13		0 / 0.00	51 / 0.84		2.3 / 0.06			0.0				13	43	1	10		
9/13 0810	60	55	10.0	96	95	7.6 / 7.8	4.8 / 0.24	7.3 / 0.60	3.0 / 0.13	0.3 / 0.01	0 / 0.00	52 / 0.85	2.0 / 0.04	1.9 / 0.05	0.3 / 0.00		0.0	13	ABS 0.0 As 0.00 PO_4 0.01	63[f]	13	42	0	10		

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

COLUSA TROUGH NEAR COLUSA (STA. 87)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25° C)	pH a/b	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (No)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by i
10/5/64 1520		75	7.8	91	528	7.9 / 8.3	3.44[c]		45. / 1.96		5 / 0.17	217 / 3.56	56. / 1.17	26. / 0.73			0.2				36	172	0	15		USGS
11/11 1530		52	8.5	77	510	- / 8.2	2.28[c]		58. / 2.52		0 / 0.00	137 / 2.25	81. / 1.69	32. / 0.90			0.2				52	114	2	280		
12/9 1235		54	10.3	96	1140	8.0 / 8.5	5.68[c]		133. / 5.79		12 / 0.40	292 / 4.79	208. / 4.33	87. / 2.45			0.3				50	284	25	30		
1/13/65 1035		48	9.0	77	732	7.8 / 7.7	30. / 1.50[c]	23. / 1.86	89. / 3.87	3.4 / 0.09	0 / 0.00	188 / 3.08	129 / 2.69	56. / 1.58	3.3 / 0.05	0.7 / 0.04	0.3	13.		442[f]	53	168	14	160		
2/2 0935		52	9.6	87	1460	7.8 / 8.6	60. / 2.99[c]	51. / 4.21	188 / 8.18	2.1 / 0.05	24 / 0.80	308 / 5.05	305 / 6.35	129 / 3.64	2.5 / 0.04		0.4	17.	PO_4 0.20	940[f]	53	360	68	20		
3/1 1020		54	7.5	70	1540	7.7 / 8.6	58. / 2.89[c]	54. / 4.47	224 / 9.74	2.1 / 0.05	16 / 0.53	382 / 6.26	277 / 5.77	154 / 4.34	2.8 / 0.05		0.7	13.		988[f]	57	368	29	15		
4/5 1150		58	9.4	92	487	8.0 / 8.4	21. / 1.05[c]	20. / 1.61	50. / 2.18	1.5 / 0.04	4 / 0.13	147 / 2.41	71. / 1.48	32. / 0.90	3.6 / 0.06		0.3	28		297[f]	45	133	6	90		
5/3 1135		62	9.7	99	716	8.1 / 8.0	32. / 1.60	25. / 2.08	88. / 3.83	1.8 / 0.05	0 / 0.00	175 / 2.87	148. / 3.08	55. / 1.55	5.7 / 0.09		0.3	17.	ABS 0.0 As 0.00 PO_4 0.35	468[f]	51	184	40	70		
6/16 1115		73	7.7	88	694	7.9 / 8.4	31. / 1.55[c]	21. / 1.69	90. / 3.92	1.4 / 0.04	6 / 0.20	186 / 3.05	118. / 2.46	46. / 1.30	2.9 / 0.05		0.2	16		437[f]	54	162	0	60		
7/14 1050		79	6.7	82	557	7.7 / 8.5	27. / 1.35[c]	21. / 1.69	64. / 2.78	1.1 / 0.03	8 / 0.27	192 / 3.15	68. / 1.42	30. / 0.85	2.3 / 0.04	0.4 / 0.02	0.3	21.		367[f]	48	152	0	30		
8/11 1230		73	7.0	80	547	7.5 / 8.6	34. / 1.70[c]	20. / 1.66	56. / 2.44	1.6 / 0.04	6 / 0.20	222 / 3.64	60. / 1.25	28. / 0.79	2.2 / 0.04		0.1	19.		341[f]	42	168	0	25		
9/15 1030		71	7.9	89	517	7.7 / 8.0	29. / 1.45	22. / 1.79	51. / 2.22	1.6 / 0.04	0 / 0.00	232 / 3.80	49. / 1.02	26. / 0.73	0.7 / 0.01		0.2	16.	ABS 0.0 As 0.00 PO_4 0.12	320[f]	40	162	0	35		

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. Q	DO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
B01125.00 COSUMNES RIVER AT McCONNELL (94a)																				
B01125.00		6.82	10.0	55.0F	7.7	100	--	--	5.4	--	0.0	38	--	4.5	--	--	.0	--	--	34
11/12/64	5000	426	94		7.3				.23		.00	.62		.13						3
1515																				
B01125.00		5.43	11.0	51.0F	7.6	77	--	--	3.4	--	0.0	31	--	1.4	--	--	.0	--	--	30
01/06/65	5000		98		7.1				.15		.00	.51		.04						5
0930																				
B01125.00		7.62	11.0	50.0F	7.7	71	--	--	3.5	--	0.0	35	--	1.7	--	--	.0	--	--	29
03/04/65	5000	758	97		7.1				.15		.00	.57		.05						1
0815																				
B01125.00		8.62	10.4	65.0F	7.6	61	5.8	2.1	3.1	0.7	0.0	30	2.0	1.3	1.2	--	.0	17	50	23
05/05/65	5000	1180	110		7.3		.29	.17	.13	.02	.00	.49	.04	.04	.02				48	0
1430							48	28	21	3		83	7	7	3					
B01125.00		5.38	8.6	77.0F	8.1	97	--	--	4.2	--	0.0	49	--	1.8	--	--	.0	--	--	39
07/13/65	5000		103		8.1				.18		.00	.80		.05						0
1115																				

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME / LAB / SAMPLER	G.H. / Q	CO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
B11150.00 COSUMNES RIVER AT MICHIGAN BAR (94)																			
B11150.00	3.77	10.6	54.0F	7.6	109	--	--	4.7	--	0.0	36	--	3.9	--	--	.0	--	--	40
11/12/64 5000	435	99		7.3				.20		.00	.59		.11						11
1345																			
B11150.00	5.49	11.8	50.0F	7.9	69	--	--	3.2	--	0.0	32	--	1.6	--	--	.0	--	--	27
01/12/65 5000	2310	105		7.3				.14		.00	.52		.05						1
1400																			
B11150.00	4.16	11.1	52.0F	7.9	77	--	--	3.5	--	0.0	39	--	1.6	--	--	.0	--	--	32
03/15/65 5000	700	101		7.3				.15		.00	.64		.05						0
1000																			
B11150.00	4.45	9.9	66.0F	7.2	50	5.0	1.5	2.7	0.8	0.0	26	1.0	0.9	0.8	--	.0	17	32	18
05/18/65 5000	960	107		7.3		.25	.12	.12	.02	.00	.43	.02	.03	.01				42	0
1415						49	24	24	4		88	4	6	2					
B11150.00	3.14	8.9	75.0F	8.0	78	--	--	3.6	--	0.0	38	--	1.6	--	--	.0	--	--	30
07/01/65 5000	180	106		7.7				.16		.00	.62		.05						0
1230																			
B11150.00	2.53	8.6	75.0F	7.5	96	14	0.7	4.1	1.4	0.0	48	4.0	1.8	0.5	--	.0	19	65	38
09/02/65 5000	50	102		8.1		.70	.06	.18	.04	.00	.79	.08	.05	.01				69	0
1030						71	6	18	4		85	9	5	1					

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

COTTONWOOD CREEK NEAR COTTONWOOD (STA. 12b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/ b/	Mineral constituents in parts per million / equivalents per million												Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform h/ MPN/ml	Analyzed by i/
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	N.C. ppm			
10/8/64 0925	62	67	9.6	105	178	7.4 / 8.3	1.50 c/		8.0 / 0.35		2 / 0.07	98 / 1.61		2.7 / 0.08			0.1				19	75	0	2		USGS
11/9 1510	422	58	9.4	93	253	7.3 / 8.1	1.84 c/		12. / 0.52		0 / 0.00	83 / 1.36		20. / 0.56			0.0				22	92	24	100		
12/10 1045	396	52	9.2	84	305	7.6 / 8.4	2.52 c/		13. / 0.57		4 / 0.13	123 / 2.02		15. / 0.42			0.0				18	126	19	1		
1/14/65 1600	2700	45	10.7	89	228	7.4 / 8.3	2.04 c/		7.7 / 0.33		1 / 0.03	118 / 1.93		3.3 / 0.09			0.1				14	102	4	120		
2/1 1545	1950	49	10.1	89	217	7.6 / 8.0	2.00 c/		5.1 / 0.22		0 / 0.00	116 / 1.90		3.5 / 0.10			0.0				10	100	5	120		
3/1 1500	734	52	10.6	97	248	7.6 / 8.6	2.32 c/		8.5 / 0.37		6 / 0.20	118 / 1.93		5.5 / 0.16			0.1				14	116	9	45		
4/5 1600	479	55	9.1	86	283	8.0 / 8.3	2.52 c/		11. / 0.48		2 / 0.07	136 / 2.23		10. / 0.28			0.0				16	126	11	25		
5/6 1350	956	58	8.1	80	250	7.8 / 8.3	30. / 1.50	9.5 / 0.78	8.2 / 0.36	0.7 / 0.02	2 / 0.07	128 / 2.10	19. / 0.40	4.6 / 0.13	1.2 / 0.02		0.0	18.	ABS 0.0 As 0.00 PO_4 0.05	155 f/	14	114	6	15		
6/11 1125	349	73	8.1	94	248	7.8 / 8.0	2.22 c/		8.3 / 0.36		0 / 0.00	133 / 2.18		6.7 / 0.19			0.1				14	111	2	2		
7/12 1140	130	76	8.1	97	252	7.8 / 8.4	2.24 c/		8.3 / 0.36		3 / 0.10	130 / 2.13		7.2 / 0.20			0.0				14	112	0	1		
8/9 1030	124	76	8.9	106	218	7.6 / 8.4	1.96 c/		7.3 / 0.32		2 / 0.07	118 / 1.93		5.7 / 0.16			0.1				14	98	0	1		
9/13 1010	60	69	9.1	101	217	7.7 / 7.8	18. / 0.90	12. / 0.98	8.7 / 0.38	1.4 / 0.04	0 / 0.00	122 / 2.00	6.0 / 0.12	5.8 / 0.16	0.2 / 0.00		0.0	21.	ABS 0.0 As 0.00 PO_4 0.07	129 f/	17	94	0	1		

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

COTTONWOOD CREEK BELOW NORTH FORK COTTONWOOD CREEK (STA. 11a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25° C)	pH a/b	Mineral constituents in parts per million / equivalents per million													Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by i
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	N.C. ppm			
10/8/64 1120	Est. 5	69	9.5	107	328	7.8 / 8.3	2.86[c]		12. / 0.52		2 / 0.07	155 / 2.54		24. / 0.68			0.1				15	143	13	1		USGS
11/13 1245	40	47	9.5	83	273	7.7 / 8.3	2.26[c]		11. / 0.48		2 / 2.07	113 / 1.85		12. / 0.34			0.0				18	113	17	20		
12/10	30	50	10.0	90	258	7.9 / 8.2	2.24[c]		9.8 / 0.43		0 / 0.00	126 / 2.07		8.3 / 0.23			0.1				16	112	9	3		
1/15/65 1000	200	45	11.2	94	203	7.4 / 8.3	1.90[c]		5.6 / 0.24		1 / 0.03	111 / 1.82		1.9 / 0.05			0.0				11	95	2	40		
2/5 1125	100	47	10.2	89	223	7.9 / 8.1	2.02[c]		6.4 / 0.28		0 / 0.00	117 / 1.92		3.4 / 0.10			0.0				12	101	5	35		
3/1 1630	75	51	10.2	93	236	7.8 / 8.2	2.24[c]		6.1 / 0.27		0 / 0.00	126 / 2.07		3.1 / 0.09			0.0				11	112	9	8		
4/9 1140	300	48	8.4	74	188	7.8 / 7.9	1.60[c]		8.1 / 0.35		0 / 0.00	88 / 1.44		2.7 / 0.08			0.1				18	80	8	70		
5/6 1500	300	55	8.3	79	225	8.0 / 8.3	27. / 1.35	9.4 / 0.77	6.5 / 0.28	0.7 / 0.02	3 / 0.10	118 / 1.93	14. / 0.29	2.8 / 0.08	1.0 / 0.02		0.0	22.	ABS 0.0 As 0.00 PO_4 0.05	140[f]	12	106	4	15		
6/11 1205	100	72	7.8	90	235	7.9 / 8.5	2.22[c]		6.5 / 0.28		8 / 0.27	118 / 1.93		4.4 / 0.12			0.0				11	111	1	2		
7/12 1040	40	74	7.9	93	254	7.8 / 8.5	2.34[c]		7.7 / 0.33		3 / 0.10	134 / 2.20		7.1 / 0.20			0.0				12	117	2	1		
8/9 0915	35	77	8.4	102	280	7.8 / 8.4	2.58[c]		9.4 / 0.41		4 / 0.13	149 / 2.44		10. / 0.28			0.1				14	129	0	1		
9/13 0845	30	70	8.4	95	297	7.8 / 8.2	29. / 1.45	15. / 1.27	10. / 0.44	1.5 / 0.04	0 / 0.00	161 / 2.64	6.0 / 0.12	12. / 0.34	3.7 / 0.06		0.0	20.	ABS 0.0 As 0.00 PO_4 0.05	166[f]	14	136	4	1		

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SOUTH FORK COTTONWOOD CREEK ABOVE COTTONWOOD CREEK (STA. 11b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25° C)	pH a/b	Mineral constituents in parts per million / equivalents per million												Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by i
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)				Total ppm	N.C. ppm			
10/8/64	No Flow																									
11/13 1205	35	58	11.2	110	427	7.8 / 8.2	/ 3.04[c]		26. / 1.13		0 / 0.00	131 / 2.15		45. / 1.27			0.2				27	152	45	20		USGS
12/10 1105	25	52	8.6	79	394	8.0 / 8.2	/ 2.92[c]		21. / 0.91		0 / 0.00	144 / 2.36		31. / 0.87			0.1				24	146	28	2		
1/14/65 1630	250	46	10.7	91	297	7.4 / 8.3	/ 2.64[c]		11. / 0.48		2 / 0.07	145 / 2.38		6.2 / 0.17			0.1				15	132	10	80		
2/5 1030	150	45	10.4	87	275	7.9 / 8.4	/ 2.44[c]		9.3 / 0.40		4 / 0.13	128 / 2.10		6.6 / 0.19			0.0				14	122	10	300		
3/1 1550	75	53	8.1	75	271	7.8 / 8.4	/ 2.40[c]		9.9 / 0.43		4 / 0.13	126 / 2.07		7.2 / 0.20			0.0				15	120	10	40		
4/5 1545	60	54	7.6	71	326	8.1 / 8.2	/ 2.82[c]		14. / 0.61		0 / 0.00	154 / 2.52		14 / 0.39			0.0				18	141	15	10		
5/6 1425	245	58	8.2	81	318	8.0 / 8.4	42. / 2.10	8.8 / 0.72	11. / 0.48	0.7 / 0.02	4 / 0.13	150 / 2.46	28. / 0.58	7.4 / 0.21	0.7 / 0.01		0.1	14.	ABS 0.1 As 0.00 PO_4 0.05	193[f]	14	141	11	40		
6/11 1055	50	72	7.8	89	285	8.0 / 8.6	/ 2.50[c]		11. / 0.48		9 / 0.30	124 / 2.03		10. / 0.28			0.0				16	125	9	2		
7/12 1100	30	75	8.1	96	323	7.8 / 8.3	/ 2.70[c]		13. / 0.57		2 / 0.07	148 / 2.43		16. / 0.45			0.1				17	135	10	1		
8/9 1000	5	74	6.8	80	342	7.4 / 8.6	/ 2.92[c]		15. / 0.65		6 / 0.20	152 / 2.49		18. / 0.51			0.1				18	146	12	2		
9/13 1040	1	70	6.8	76	366	7.4 / 7.7	40. / 2.00	13. / 1.10	15. / 0.65	1.5 / 0.04	0 / 0.00	168 / 2.75	20. / 0.42	22. / 0.62	3.9 / 0.06		0.1	16.	ABS 0.0 As 0.00 PO_4 0.01	211[f]	17	155	17	1		

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

COW CREEK NEAR MILLVILLE (STA. 88a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million / equivalents per million												Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by i
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	N.C. ppm			
10/9/64 1010	23	67	8.8	96	201	7.7 / 8.2	---- / 1.56[c]		10. / 0.44		0 / 0.00	110 / 1.80		7.7 / 0.22			0.1				22	78	0	2		USGS
11/9 1150	2530	53	10.2	94	155	7.3 / 6.9	---- / 1.06[c]		13 / 0.57		0 / 0.00	52 / 0.85		8.6 / 0.24			0.1				35	53	10	130		
12/10 1600	270	52	9.6	88	154	7.3 / 8.0	---- / 1.12[c]		8.3 / 0.36		0 / 0.00	64 / 1.05		7.4 / 0.21			0.2				24	56	4	4		
1/14/65 1515	1150	46	11.3	96	104	7.2 / 7.8	---- / 0.82[c]		5.7 / 0.25		0 / 0.00	51. / 0.84		2.5 / 0.07			0.1				23	41	0	10		
2/1 1335	768	48	11.5	100	105	7.2 / 7.7	---- / 0.82[c]		5.3 / 0.23		0 / 0.00	48 / 0.79		2.6 / 0.07			0.3				22	41	2	4		
3/1 1220	404	48	10.0	87	117	7.5 / 8.2	---- / 0.90[c]		6.6 / 0.29		0 / 0.00	56 / 0.92		2.7 / 0.08			0.0				24	45	0	4		
4/5 1345	570	59	9.2	86	120	7.4 / 7.6	---- / 0.92[c]		6.1 / 0.27		0 / 0.00	56 / 0.92		7.4 / 0.21			0.0				23	46	0	2		
5/5 0720	616	54	9.2	86	99	7.3 / 8.0	12 / 0.60	2.4 / 0.20	4.6 / 0.20	0.7 / 0.02	0 / 0.00	48 / 0.79	5.0 / 0.10	2.2 / 0.06	1.3 / 0.02		0.0	25	ABS 0.0 As 0.00 PO_4 0.05	72[f]	20	40	1	1	
6/3 1015	211	73	8.6	100	119	7.7 / 8.3	---- / 0.94[c]		5.8 / 0.25		1 / 0.03	62. / 1.02		2.8 / 0.08			0.0				21	47	0	2		
7/6 1530	58	85	8.6	113	151	7.9 / 8.2	---- / 1.20[c]		7.7 / 0.33		0 / 0.00	82. / 1.34		3.7 / 0.10			0.1				22	60	0	1		
8/13 0830	112	73	8.0	93	163	7.6 / 8.0	---- / 1.28[c]		8.0 / 0.35		0 / 0.00	84 / 1.38		5.2 / 0.15			0.0				21	64	0	4		
9/7 1320	43	73	9.4	109	171	8.1 / 7.9	16 / 0.80	6.3 / 0.52	9.3 / 0.40	1.3 / 0.03	0 / 0.00	92 / 1.51	3.0 / 0.06	5.9 / 0.17	0.5 / 0.01		0.0	30	ABS 0.0 As 0.00 PO_4 0.06	118[f]	23	66	0	2		

TABLE D-2

MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. Q	CC	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
B9 1700.00 DELTA CROSS CHANNEL NEAR WALNUT GROVE (98)																				
B91700.00		3.09	7.5	70.0F	8.0	149	--	--	8.3	--	0.0	75	--	4.4	--	--	.0	--	--	56
10/05/64	5000		84		7.3				.36		.00	1.23		.12						0
1345																				
B91700.00		4.28	8.9	58.0F	8.1	188	--	--	12	--	0.0	81	--	7.8	--	--	.1	--	--	64
11/09/64	5000		87		7.3				.52		.00	1.33		.22						0
1430																				
B91700.00		3.55	10.2	53.0F	8.2	176	--	--	11	--	0.0	76	--	6.9	--	--	.3	--	--	61
12/09/64	5000		94		7.3				.48		.00	1.25		.19						0
1345																				
B91700.00		19.33	11.6	48.0F	7.9	95	--	--	4.9	--	0.0	41	--	1.8	--	--	.0	--	--	36
01/05/65	5000		100		7.3				.21		.00	.67		.05						3
0930																				
B91700.00		16.12	10.7	47.0F	8.1	121	--	--	5.5	--	0.0	59	--	2.8	--	--	.0	--	--	47
02/04/65	5000		91		7.3				.24		.00	.97		.08						0
1430																				
B91700.00		3.35	10.9	53.0F	7.9	132	--	--	6.9	--	0.0	62	--	5.2	--	--	.0	--	--	50
03/03/65	5000		100		7.3				.30		.00	1.02		.15						0
1430																				
B91700.00		4.75	10.1	54.0F	7.9	128	--	--	8.6	--	0.0	56	--	5.1	--	--	.1	--	--	48
04/07/65	5000		94		7.3				.37		.00	.92		.14						2
1500																				
B91700.00		3.10	10.1	60.0F	7.7	92	8.8	3.6	4.2	0.8	0.0	43	7.0	2.-	1.1	--	.0	16	65	37
05/04/65	5000		101		7.3		.44	.30	.18	.02	.00	.71	.15	.06	.02				65	2
1400							47	32	19	2		76	16	6	2					
B91700.00		3.97	8.4	71.0F	8.2	164	--	--	11	--	0.0	68	--	8.4	--	--	.0	--	--	57
06/16/65	5000		95		7.5				.48		.00	1.12		.24						1
1300																				
B91700.00		3.38	8.0	72.0F	8.0	148	--	--	9.4	--	0.0	68	--	6.2	--	--	.0	--	--	53
07/14/65	5000		91		7.7				.41		.00	1.12		.17						0
1340																				
B91700.00		3.66	7.4	72.0F	8.5	160	--	--	11	--	2.0	73	--	7.6	--	--	.1	--	--	56
08/11/65	5000		84		7.7				.48		.07	1.20		.21						0
1330																				
B91700.00		3.00	8.0	71.0F	7.8	218	17	8.1	15	1.8	0.0	98	12	14	1.4	--	.0	20	134	76
09/14/65	5000		90		7.7		.85	.67	.65	.05	.00	1.61	.25	.39	.02				137	0
1315							38	30	29	2		71	11	17	1					

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

ELDER CREEK AT GERBER (STA. 95a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million / equivalents per million													Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by i
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	N.C. ppm			
10/7/64	No Flow																									USGS
11/13 1115	160	51	10.7	97	343	7.9 / 8.5	— / 2.98[c]		14. / 0.61		5 / 0.17	150 / 2.46		11. / 0.31			0.1				17	149	18	45		
12/9 1725	32	53	9.8	91	215	7.6 / 8.4	— / 1.91[c]		6.8 / 0.30		5 / 0.17	97 / 1.59		4.6 / 0.13			0.1				14	96	8	20		
1/14/65 0955	275	44	10.9	90	288	8.1 / 8.6	— / 2.80[c]		7.8 / 0.34		4 / 0.13	154 / 2.52		5.6 / 0.16			0.0				11	140	7	50		
2/5 0935	210	47	10.1	87	253	7.9 / 8.5	— / 2.38[c]		8.2 / 0.36		2 / 0.07	134 / 2.20		6.4 / 0.18			0.0				13	119	6	55		
3/5 0930	66	50	9.1	81	319	8.0 / 8.5	— / 2.96[c]		9.5 / 0.41		8 / 0.27	154 / 2.52		12 / 0.34			0.0				12	148	9	6		
4/9 0945	1200	48	8.8	76	159	7.9 / 8.0	— / 1.48[c]		4.2 / 0.18		0 / 0.00	88 / 1.44		1.8 / 0.05			0.0				11	74	2	500		
5/6 1145	130	53	9.2	85	282	8.2 / 8.5	34 / 1.70	12 / 1.02	7.5 / 0.33		5 / 0.17	149 / 2.44	12 / 0.25	6.8 / 0.19	1.4 / 0.02		0.0	18	ABS 0.0 As 0.00 PO_4 0.10	157[f]	11	136	6	11		
6/2 1915	35	70	9.0	101	365	8.1 / 8.7	— / 3.56[c]		12 / 0.52		12 / 0.40	184 / 3.02		16 / 0.45			0.0				13	178	7	2		
7/12 1215	36	81	9.5	119	442	8.3 / 8.6	— / 4.08[c]		12 / 0.52		14 / 0.47	203 / 3.33		26 / 0.73			0.0				11	204	15	1		
8/9 1215	2.6	80	12.2	152	464	7.9 / 8.6	— / 4.28[c]		19 / 0.83		11 / 0.37	232 / 3.80		24 / 0.68			0.1				16	214	6	1		
9/8 1210	--	80	12.0	149	519	8.2 / 8.4	43 / 2.15	33 / 2.73	21 / 0.91	1.5 / 0.04	10 / 0.33	267 / 4.38	17 / 0.35	26 / 0.73	0.5 / 0.01		0.0	22	ABS 0.0 As 0.00 PO_4 0.05	303[f]	16	244	9	10		

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

ELDER CREEK NEAR PASKENTA (STA. 13e)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (No)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by[i]
							equivalents per million																			
10/6/64 1210	0.5	70	9.7	110	2,420	8.2 / 8.4	— / 9.80[c]		225. / 9.79		4 / 0.13	130 / 2.13		610. / 17.21			0.3				50	490	377	1		USGS
11/12 1500	205	57	10.0	98	323	- / 8.5	— / 2.82[c]		11. / 0.48		4 / 0.13	145 / 2.38		16. / 0.45			0.1				15	141	16	40		
12/10 1235	34	50	11.4	103	425	8.1 / 8.4	— / 3.62[c]		20 / 0.87		8 / 0.27	182 / 2.98		29 / 0.82			0.0				19	181	19	1		
1/14/65 1530	269	50	10.7	96	270	8.3 / 8.6	— / 2.66[c]		6.7 / 0.29		5 / 0.17	145 / 2.38		4.8 / 0.14			0.0				10	133	6	140		
2/3 1225	190	49	10.5	93	233	7.9 / 8.4	— / 2.22[c]		6.2 / 0.27		4 / 0.13	120 / 1.97		5.9 / 0.17			0.0				11	111	6	140		
3/2 1115	66	49	9.8	87	289	7.8 / 8.4	— / 2.72[c]		8.1 / 0.35		4 / 0.13	145 / 2.38		12 / 0.34			0.0				11	136	11	7		
4/6 1445	26	54	10.6	100	307	8.2 / 8.5	— / 2.84[c]		10 / 0.44		5 / 0.17	151 / 2.47		12 / 0.34			0.1				13	142	10	8		
5/5 1000	124	52	11.3	104	276	8.2 / 8.3	23 / 1.15	18 / 1.49	7.0 / 0.30	0.5 / 0.01	5 / 0.17	146 / 2.39	12 / 0.25	6.3 / 0.18	1.1 / 0.02		0.0	17	ABS 0.0 As 0.00 PO_4 0.05	17[f]	10	132	4	15		
6/17 1145	21	71	8.6	99	399	8.2 / 8.7	— / 3.78[c]		13 / 0.57		12 / 0.40	192 / 3.15		23 / 0.65			0.0				13	189	12	1		
7/15 0945	16	77	9.7	118	479	8.3 / 8.8	— / 4.00[c]		26 / 1.13		16 / 0.53	188 / 3.08		47 / 1.33	2.4 / 0.04		0.0				22	200	20	1		
8/12 1340	7.5	80	8.5	107	537	8.3 / 8.7	— / 4.36[c]		30. / 1.30		12 / 0.40	210 / 3.44		57 / 1.61			0.1				23	218	26	2		
9/16 1130	4.4	70	10.2	116	697	8.1 / 8.6	38 / 1.90	34 / 2.76	54 / 2.35	1.3 / 0.03	8 / 0.27	208 / 3.41	11 / 0.23	112 / 3.16	2.9 / 0.05		0.2	13	ABS 0.0 As 0.00 PO_4 0.02	411[f]	33	233	49	1		

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. / Q	DO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
A55100.00 FEATHER RIVER, MIDDLE FORK, NEAR MERRIMAC (19b)																				
A55100.00		2.38	10.3	60.0F	8.3	161	--	--	7.0	--	2.0	80	--	3.2	--	--	.1	--	--	68
10/14/64	5000	222	110		8.1				.30		.07	1.31		.09						0
1200																				
A55100.00		2.93	12.8	38.0F	8.1	138	--	--	5.8	--	0.0	72	--	1.7	--	--	.1	--	--	55
11/19/64	5000	239	102		7.3				.25		.00	1.18		.05						0
1530																				
A55100.00		4.54	11.8	43.0F	7.8	92	--	--	3.4	--	0.0	47	--	0.9	1.3	--	.0	--	--	39
12/03/64	5000	964	101		7.3				.15		.00	.77		.03	.02					1
1200																				
A55100.00			13.1	41.0F	7.9	72	--	--	3.5	--	0.0	37	--	0.9	0.8	--	.1	--	62	28
01/26/65	5000		116		7.3				.15		.00	.61		.03	.01					0
1400																				
A55100.00		9.02	12.5	40.0F	8.0	83	--	--	4.0	--	0.0	46	--	1.0	0.8	--	.1	--	60	33
02/09/65	5000		102		7.2				.17		.00	.75		.03	.01					0
1315																				
A55100.00		8.16	11.8	46.0F	7.9	89	--	--	3.6	--	0.0	46	--	1.2	0.6	--	.1	--	66	37
03/12/65	5000	5080	105		7.3				.16		.00	.75		.03	.01					0
1315																				
A55100.00		8.53	11.6	47.0F	7.9	98	--	--	5.1	--	0.0	52	--	1.4	0.5	--	.0	--	71	40
04/01/65	5000		105		7.5				.22		.00	.85		.04	.01					0
1315																				
A55100.00		9.05	10.8	55.0F	7.7	79	9.6	2.2	3.3	0.4	0.0	42	3.0	0.8	0.5	--	.0	16	60	33
05/13/65	5000		108		7.6		.48	.18	.14	.01	.00	.69	.06	.02	.01				56	0
1200							59	22	17	1		88	8	3	1					
A55100.00		7.95	9.2	65.0F	8.1	80	--	--	3.4	--	0.0	42	--	0.8	1.0	--	.1	--	58	34
06/11/65	5000		104		7.6				.15		.00	.69		.02	.02					0
1230																				
A55100.00		6.51	8.7	68.0F	8.2	114	--	--	4.3	--	0.0	62	--	1.4	2.5	--	.0	--	80	49
07/08/65	5000	674	101		8.0				.19		.00	1.02		.04	.04					0
1315																				
A55100.00		5.96	8.6	75.0F	8.2	142	--	--	5.9	--	0.0	78	--	1.8	--	--	.0	--	--	63
08/06/65	5000	2070	108		8.3				.26		.00	1.28		.05						0
1230																				
A55100.00		5.93	9.1	69.0F	7.9	155	19	4.5	6.4	1.5	0.0	82	7.0	2.7	0.5	--	.0	14	97	66
09/03/65	5000	2040	107		8.2		.95	.37	.28	.04	.00	1.34	.15	.08	.01				96	0
1215							58	23	17	2		85	9	5	1					

TABLE D-2

MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME / LAB / SAMPLER	G.H. O	DO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
A05103.00 FEATHER RIVER AT NICOLAUS (20)																			
A05103.00 10/09/64 5000 1430	22.68 2140	9.3 104	70.0F	8.2 7.7	120	-- 	-- 	5.1 .22	-- 	0.0 .00	70 1.15	-- 	1.5 .04	--	--	.0	--	--	52 0
A05103.00 11/13/64 5000 1515	25.14 5300	10.7 97	52.0F	7.8 7.3	122	-- 	-- 	5.3 .23	-- 	0.0 .00	60 .98	-- 	2.6 .07	--	--	.1	--	--	49 0
A05103.00 12/11/64 5000 1445	23.93 3600	11.5 103	51.0F	7.9 7.3	116	-- 	-- 	4.7 .20	-- 	0.0 .00	64 1.05	-- 	1.1 .03	--	--	.0	--	--	49 0
A05103.00 01/08/65 5000 1545	43.04	11.4 98	48.0F	7.3 7.1	72	-- 	-- 	3.2 .14	-- 	0.0 .00	28 .46	-- 	1.2 .03	--	--	.1	--	--	28 5
A05103.00 02/05/65 5000 1530	34.09 21900	11.6 101	49.0F	7.8 7.3	80	-- 	-- 	3.1 .13	-- 	0.0 .00	39 .64	-- 	1.4 .04	--	--	.0	--	--	33 1
A05103.00 03/05/65 5000 1515	28.39 10200	11.7 106	52.0F	7.9 7.3	88	-- 	-- 	3.4 .15	-- 	0.0 .00	44 .72	-- 	1.4 .04	--	--	.0	--	--	36 0
A05103.00 04/09/65 5000 1430	28.78 10900	11.2 95	47.0F	7.6 7.3	82	-- 	-- 	3.6 .16	-- 	0.0 .00	42 .69	-- 	1.0 .03	--	--	.0	--	--	34 0
A05103.00 05/07/65 5000 1500	29.48 12100	11.1 107	57.0F	7.6 7.3	71	8.4 .42 58	2.1 .17 23	2.8 .12 16	0.6 .02 3	0.0 .00	34 .56 76	7.0 .15 20	0.9 .03 4	0.1 .00	--	.0	16	53 55	30 2
A05103.00 06/18/65 5000 1430	24.77 4800	9.0 99	69.0F	8.0 7.3	83	-- 	-- 	3.6 .16	-- 	0.0 .00	44 .72	-- 	0.9 .03	--	--	.0	--	--	35 0
A05103.00 07/16/65 5000 0750	22.88 2350	8.4 100	76.0F	8.2 8.1	112	-- 	-- 	4.6 .20	-- 	0.0 .00	60 .98	-- 	1.8 .05	--	--	.0	--	--	48 0
A05103.00 08/13/65 5000 1400	22.33 1770	8.4 103	79.0F	8.0 7.7	115	-- 	-- 	5.0 .22	-- 	0.0 .00	62 1.02	-- 	1.5 .04	--	--	.0	--	--	48 0
A05103.00 09/17/65 5000 1345	 1640	9.5 100	65.0F	8.0 7.9	117	16 .80 65	2.4 .20 16	4.6 .20 16	1.1 .03 2	0.0 .00	65 1.07 88	5.0 .10 8	1.6 .05 4	0.2 .00	--	.0	12	76 75	50 0

TABLE D-2

MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME / LAB / SAMPLER	G.H. Q	DO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
A53140.00 FEATHER RIVER, NORTH FORK, AT BIG BAR (19a)																			
A53140.00 10/09/64 5000 1000	3.43 44	9.6 101	61.0F	8.0 7.5	121	--	--	5.2 .23	--	0.0 .00	72 1.18	--	1.2 .03	--	--	.0	--	--	53 0
A53140.00 11/20/64 5000 0915	3.31 34	11.9 108	42.0F	8.2 7.3	117	--	--	4.8 .21	--	0.0 .00	70 1.15	--	0.6 .02	--	--	.1	--	--	49 0
A53140.00 12/04/64 5000 0930	3.52 58	11.4 98	45.0F	8.1 7.3	128	--	--	4.9 .21	--	0.0 .00	72 1.18	--	0.9 .03	1.3 .02	--	.0	--	--	54 0
A53140.00 01/15/65 5000 1430	8.13 1480	12.5 106	44.0F	8.0 7.3	80	--	--	3.5 .15	--	0.0 .00	44 .72	--	1.2 .03	0.5 .01	--	.0	--	60	35 0
A53140.00 02/05/65 5000 1100	8.90 1940	12.3 104	44.0F	7.9 7.3	80	--	--	3.3 .14	--	0.0 .00	42 .69	--	0.4 .01	0.5 .01	--	.0	--	55	34 0
A53140.00 03/10/65 5000 1145	4.03 140	12.0 106	47.0F	7.8 7.3	80	--	--	2.7 .12	--	0.0 .00	44 .72	--	0.6 .02	0.5 .01	--	.0	--	54	35 0
A53140.00 04/09/65 5000 1130		11.7 99	44.0F	7.6 7.3	78	--	--	2.5 .11	--	0.0 .00	45 .74	--	0.6 .02	0.9 .01	--	.0	--	56	36 0
A53140.00 05/12/65 5000 1130	7.23 985	11.0 109	56.0F	7.6 7.3	74	8.6 .43 57	2.3 .19 25	2.9 .13 17	0.5 .01 1	0.0 .00	40 .66 88	3.0 .06 8	0.6 .02 3	0.6 .01 1	--	.0	14	55 52	31 0
A53140.00 06/18/65 5000 0915	3.88 90	10.1 105	60.0F	8.1 7.3	88	--	--	3.8 .17	--	0.0 .00	48 .79	--	0.7 .02	1.1 .02	--	.0	--	58	37 0
A53140.00 07/21/65 5000 1140		9.8 115	71.0F	7.9 8.1	98	--	--	3.7 .16	--	0.0 .00	55 .90	--	1.0 .03	--	--	.0	--	--	43 0
A53140.00 08/13/65 5000 1015	99	9.9 113	68.0F	8.2 7.7	99	--	--	3.9 .17	--	0.0 .00	56 .92	--	1.0 .03	--	--	.0	--	--	42 0
A53140.00 09/08/65 5000 0915		9.7 104	63.0F	7.9 7.5	104	10 .50 45	4.6 .38 34	4.4 .19 17	1.5 .04 4	0.0 .00	61 1.00 91	4.0 .08 7	0.8 .02 2	0.3 .00	--	.0	10	68 65	44 0

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. / Q	DO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
A51140.00 FEATHER RIVER AT OROVILLE (19)																				
A51140.00		136.31	10.4	68.0F	8.0	123	--	--	5.2	--	0.0	73	--	1.0	--	--	.0	--	--	52
10/09/64	5000	2640	115		7.9				.23		.00	1.20		.03						0
1200																				
A51140.00		136.95	12.3	48.0F	7.3	98	--	--	5.6	--	0.0	50	--	1.2	--	--	.0	--	--	40
11/13/64	5000	3740	106		7.3				.24		.00	.82		.03						0
1300																				
A51140.00		4.20	12.9	49.0F	7.7	79	--	--	3.3	--	0.0	42	--	0.8	1.4	--	.0	--	--	32
12/11/64	5000	7760	114		7.7				.14		.00	.69		.02	.02					0
1030																				
A51140.00		9.05	13.7	42.0F	7.4	65	--	--	3.3	--	0.0	33	--	0.4	1.1	--	.1	--	--	26
01/08/65	5000	25600	110		7.1				.14		.00	.54		.01	.02					0
1115																				
A51140.00		5.57	12.5	46.0F	7.9	79	--	--	3.8	--	0.0	41	--	0.6	0.8	--	.1	--	58	32
02/05/65	5000	12200	106		7.3				.17		.00	.67		.02	.01					0
1300																				
A51140.00		3.38	12.5	47.0F	7.9	87	--	--	3.7	--	0.0	46	--	1.2	0.2	--	.0	--	59	36
03/05/65	5000	5560	107		7.3				.16		.00	.75		.03	.00					0
1030																				
A51140.00		5.17	13.2	46.0F	7.6	77	--	--	3.9	--	0.0	42	--	1.0	0.7	--	.0	--	62	31
04/09/65	5000	11000	112		7.3				.17		.00	.69		.03	.01					0
1030																				
A51140.00		4.86	12.9	51.0F	7.5	72	9.2	1.6	3.1	0.5	0.0	38	2.0	1.1	0.2	--	.0	17	58	30
05/07/65	5000	10000	117		7.3		.46	.13	.13	.01	.00	.62	.04	.03	.00				53	0
1015							63	18	18	1		90	6	4						
A51140.00		3.33	11.4	62.0F	8.1	86	--	--	3.6	--	0.0	47	--	0.6	0.7	--	.0	--	60	36
06/18/65	5000	5400	118		7.5				.16		.00	.77		.02	.01					0
1200																				
A51140.00		2.48	9.4	67.0F	7.7	95	--	--	4.1	--	0.0	51	--	1.1	--	--	.0	--	--	39
07/16/65	5000	3390	103		7.8				.18		.00	.84		.03						0
1245																				
A51140.00		2.58	9.6	68.0F	8.1	97	--	--	4.0	--	0.0	54	--	1.0	--	--	.0	--	--	40
08/13/65	5000	3600	106		7.7				.17		.00	.89		.03						0
0915																				
A51140.00		2.18	10.1	63.0F	7.9	105	12	2.9	4.5	1.1	0.0	58	3.0	1.2	0.8	--	.0	12	68	42
09/17/65	5000	2750	105		7.5		.60	.24	.20	.03	.00	.95	.06	.03	.01				66	0
1045							56	22	19	3		90	6	3	1					

TABLE D-2

MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. / Q	DO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
A05120.00							A05120.00 FEATHER RIVER BELOW SHANGHAI BEND (20a)														
A05120.00		34.30	9.2	69.0F	7.9	120	--	--	5.0	--	0.0	70	--	1.5	--	--	.0	--	--	52
10/09/64	5000	1850	103		7.7				.22		.00	1.15		.04						0
1400																				
A05120.00		35.2	11.6	48.0F	8.0	122	--	--	5.0	--	0.0	48	--	1.4	--	--	.1	--	--	50
11/20/64	5000	2740	100		7.5				.22		.00	.79		.04						11
1230																				
A05120.00		35.56	11.4	52.0F	7.9	113	--	--	4.7	--	0.0	62	--	1.3	--	--	.0	--	--	46
12/11/64	5000	3140	103		7.3				.20		.00	1.02		.04						0
1400																				
A05120.00		53.52	12.5	45.0F	7.6	62	--	--	2.4	--	0.0	30	--	0.6	--	--	.0	--	--	23
01/08/65	5000	51900	103		7.1				.10		.00	.49		.02						0
1500																				
A05120.00		42.57	12.0	48.0F	7.9	82	--	--	3.3	--	0.0	42	--	1.2	--	--	.0	--	--	34
02/05/65	5000	15700	103		7.3				.14		.00	.69		.03						0
1430																				
A05120.00		38.97	11.8	52.0F	7.5	87	--	--	3.4	--	0.0	45	--	1.2	--	--	.0	--	--	37
03/15/65	5000	8150	107		7.3				.15		.00	.74		.03						0
1445																				
A05120.00		40.78	11.7	47.0F	7.6	81	--	--	3.5	--	0.0	42	--	1.0	--	--	.0	--	--	34
04/09/65	5000	11700	99		7.3				.15		.00	.69		.03						0
1330																				
A05120.00		40.82	10.7	60.0F	7.7	68	7.8	2.1	2.6	0.2	0.0	35	3.0	0.7	0.4	--	.0	14	51	28
05/14/65	5000	11750	107		7.3		.39	.17	.11	.01	.00	.57	.06	.02	.01				48	0
0930							57	25	16	1		86	9	3	2					
A05120.00		37.01		68.0F	8.0	80	--	--	3.7	--	0.0	42	--	0.9	--	--	.0	--	--	34
06/18/65	5000	5000			7.3				.16		.00	.69		.03						0
1400																				
A05120.00		33.76	7.9	76.0F	8.2	109	--	--	4.6	--	0.0	58	--	1.6	--	--	.0	--	--	47
07/16/65	5000	1390	94		7.5				.20		.00	.95		.05						0
0830																				
A05120.00		34.42	8.1	77.0F	8.2	111	--	--	4.7	--	0.0	61	--	1.4	--	--	.0	--	--	47
08/13/65	5000	1865	97		7.3				.20		.00	1.00		.04						0
1315																				
A05120.00		33.93	9.4	65.0F	8.0	118	14	3.2	4.5	1.1	0.0	64	4.0	1.5	0.4	--	.0	15	75	48
09/17/65	5000	1530	99		7.7		.70	.26	.20	.03	.00	1.05	.08	.04	.01				75	0
1300							59	22	17	3		89	7	3	1					

TABLE D-2

MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. Q	CO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
							CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
A56080.00 FEATHER RIVER, SOUTH FORK, BELOW PONDEROSA DAM (19C)																				
A56080.00			9.9	62.0F	7.5	49	--	--	2.5	--	0.0	24	--	0.8	--	--	.0	--	--	20
10/14/64	5000		104		7.3				.11		.00	.39		.02						1
1000																				
A56080.00			10.5	51.0F	7.6	58	--	--	2.9	--	0.0	26	--	0.8	--	--	.0	--	--	22
11/19/64	5000		97		7.1				.13		.00	.43		.02						1
1315																				
A56080.00			10.9	51.0F	7.3	56	--	--	3.0	--	0.0	26	--	0.8	1.4	--	.0	--	--	22
12/03/64	5000		101		7.1				.13		.00	.43		.02	.02					1
1500																				
A56080.00			12.5	43.0F	7.7	40	--	--	2.3	--	0.0	21	--	0.6	0.2	--	.0	--	38	18
01/15/65	5000		79		7.0				.10		.00	.34		.02	.00					1
0945																				
A56080.00			12.7	42.0F	7.7	40	--	--	1.8	--	0.0	19	--	0.4	0.4	--	.0	--	30	18
02/09/65	5000	350	104		7.0				.08		.00	.31		.01	.01					3
1030																				
A56080.00			12.6	46.0F	7.5	40	--	--	1.8	--	0.0	20	--	0.6	0.3	--	.0	--	33	16
03/12/65	5000	200	109		7.0				.08		.00	.33		.02	.00					0
1045																				
A56080.00			12.4	47.0F	7.2	42	--	--	2.2	--	0.0	21	--	0.8	0.7	--	.0	--	34	16
04/02/65	5000		108		7.1				.10		.00	.34		.02	.01					0
1045																				
A56080.00			11.7	53.0F	7.5	41	4.4	1.5	1.7	0.1	0.0	22	1.0	0.6	0.4	--	.0	12	34	17
05/13/65	5000		111		7.2		.22	.12	.07	.00	.00	.36	.02	.02	.01				32	0
0945							54	29	17			88	5	5	2					
A56080.00			10.4	67.0F	7.8	45	--	--	2.3	--	0.0	22	--	0.8	1.2	--	.0	--	37	17
06/11/65	5000		116		7.1				.10		.00	.36		.02	.02					0
1000																				
A56080.00			6.0	66.0F	7.3	75	--	--	3.5	--	0.0	39	--	0.8	2.1	--	.1	--	61	28
07/08/65	5000		66		6.8				.15		.00	.64		.02	.03					0
0830																				
A56080.00			9.6	71.0F	7.7	45	--	--	2.4	--	0.0	22	--	0.6	--	--	.0	--	--	16
08/06/65	5000		112		7.1				.10		.00	.36		.02						0
0930																				
A56080.00			10.5	66.0F	7.4	43	5.0	0.4	2.8	0.3	0.0	22	1.0	0.6	0.5	--	.0	10	33	14
09/03/65	5000		116		7.2		.25	.03	.12	.01	.00	.36	.02	.02	.01				31	0
0945							61	7	29	2		88	5	5	2					

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME / LAB / SAMPLER	G.H. Q	DO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
A52100.00 FEATHER RIVER, WEST BRANCH, NEAR YANKEE HILL (19d)																			
A52100.00 11/20/64 1045 5000		11.7 100	46.0F	8.1 7.5	119	-- 	-- 	3.6 .16	-- 	0.0 .00	70 1.15	-- 	0.9 .03	-- 	-- 	.0 	-- 	-- 	55 0
A52100.00 12/04/64 1030 5000		12.2 101	44.0F	7.5 7.3	62	-- 	-- 	2.4 .10	-- 	0.0 .00	33 .54	-- 	0.5 .01	0.8 .01	-- 	.0 	-- 	-- 	26 0
A52100.00 01/15/65 1530 5000		12.4 107	47.0F	7.6 7.1	44	-- 	-- 	2.3 .10	-- 	0.0 .00	25 .41	-- 	0.6 .02	0.4 .01	-- 	.0 	-- 	41 	19 0
A52100.00 02/05/65 1145 5000		11.7 101	47.0F	7.7 7.1	46	-- 	-- 	2.0 .09	-- 	0.0 .00	25 .41	-- 	0.2 .01	1.0 .02	-- 	.0 	-- 	32 	19 0
A52100.00 03/10/65 1230 5000		11.7 101	47.0F	7.7 7.3	51	-- 	-- 	2.1 .09	-- 	0.0 .00	28 .46	-- 	0.6 .02	0.3 .00	-- 	.0 	-- 	40 	21 0
A52100.00 04/09/65 1215 5000		12.4 105	45.0F	7.6 7.3	66	-- 	-- 	2.1 .09	-- 	0.0 .00	38 .62	-- 	0.6 .02	1.0 .02	-- 	.0 	-- 	50 	30 0
A52100.00 05/13/65 1430 5000		11.1 107	55.0F	7.6 7.3	42	4.2 .21 50	1.7 .14 33	1.7 .07 17	0.1 .00	0.0 .00	23 .38 90	1.0 .02 5	0.4 .01 2	0.5 .01 2	-- 	.0 	12 	30 33	18 0
A52100.00 06/18/65 1030 5000		9.8 101	61.0F	7.9 7.5	62	-- 	-- 	2.8 .12	-- 	0.0 .00	34 .56	-- 	0.4 .01	0.6 .01	-- 	.0 	-- 	50 	25 0
A52100.00 07/21/65 1230 5000		8.3 100	75.0F	8.3 8.1	135	-- 	-- 	3.5 .15	-- 	2.0 .07	76 1.25	-- 	1.3 .04	-- 	-- 	.0 	-- 	-- 	62 0
A52100.00 08/13/65 1100 5000		8.8 101	71.0F	8.0 7.3	83	-- 	-- 	3.3 .14	-- 	0.0 .00	44 .72	-- 	0.9 .03	-- 	-- 	.0 	-- 	-- 	34 0
A52100.00 09/08/65 1000 5000		9.2 113	77.0F	8.2 8.1	148	13 .65 40	9.6 .79 48	4.0 .17 10	0.9 .02 1	0.0 .00	93 1.53 94	3.0 .06 4	1.5 .04 2	0.3 .00	-- 	.0 	18 	94 96	72 0

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. Q	DO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
							CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
B95300.00 GRANT LINE CANAL AT TRACY ROAD BRIDGE (103a)																				
B95300.00		5.47	7.5	69.0F	8.4	834	--	--	86	--	4.0	152	--	141	--	--	.2	--	--	196
10/08/64	5000		83		7.7				3.74		.13	2.49		3.98						65
0945																				
B95300.00		5.00	8.2	57.0F	8.3	702	--	--	78	--	2.0	126	--	110	--	--	.4	--	--	156
11/11/64	5000		79		7.3				3.39		.07	2.07		3.10						49
1200																				
B95300.00		11.72	8.3	55.0F	8.4	641	--	--	74	--	3.0	106	--	101	--	--	.3	--	--	140
12/10/64	5000		78		7.3				3.22		.10	1.74		2.85						48
1200																				
B95300.00		14.97	9.5	50.0F	8.1	216	--	--	19	--	0.0	56	--	23	--	--	.2	--	--	57
01/07/65	5000		84		7.1				.83		.00	.92		.65						11
1100																				
B95300.00		12.08	10.2	48.0F	7.9	257	--	--	26	--	0.0	54	--	32	--	--	.1	--	--	62
02/03/65	5000		88		7.1				1.13		.00	.89		.90						18
1230																				
B95300.00		11.97	10.5	55.0F	8.3	321	--	--	32	--	2.0	56	--	45	--	--	.1	--	--	75
03/04/65	5000		99		7.3				1.39		.07	.92		1.27						26
1100																				
B95300.00		5.81	10.2	55.0F	7.8	312	--	--	34	--	0.0	65	--	42	--	--	.2	--	--	71
04/08/65	5000		96		7.5				1.48		.00	1.07		1.18						18
1415																				
B95300.00		6.42	10.1	59.0F	8.0	240	16	5.1	22	1.4	0.0	60	18	31	1.4	--	.0	17	140	61
05/06/65	5000		100		7.5		.80	.42	.96	.04	.00	.98	.37	.87	.02				141	12
1000							36	19	43	2		44	17	39	1					
B95300.00		6.14	8.5	65.0F	8.0	140	--	--	12	--	0.0	36	--	18	--	--	.0	--	--	37
06/17/65	5000		90		7.1				.52		.00	.59		.51						8
1015																				
B95300.00		13.12	9.3	77.0F	8.2	698	--	--	73	--	0.0	127	--	124	--	--	.1	--	--	166
07/15/65	5000		111		8.1				3.18		.00	2.08		3.50						62
0920																				
B95300.00		3.65	7.1	78.0F	8.4	854	--	--	90	--	4.0	152	--	154	--	--	.2	--	--	202
08/12/65	5000		86		8.1				3.92		.13	2.49		4.34						71
1130																				
B95300.00		5.32	11.1	72.0F	7.8	696	38	16	73	3.6	0.0	142	49	113	4.4	--	.0	24	412	160
09/16/65	5000		126		8.4		1.90	1.32	3.18	.09	.00	2.33	1.02	3.19	.07				391	44
1000							29	20	49	1		35	15	48	1					

TABLE D-2

MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. / Q	DO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
							CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
A54320.00 INDIAN CREEK NEAR CRESCENT MILLS (17d)																				
A54320.00 11/06/64 1030	5000	2.52 138	10.5 100	46.0F	7.3 7.3	147	-- 	-- 	7.1 .31	-- 	0.0 .00	82 1.34	-- 	1.3 .04	-- 	-- 	.0 	-- 	-- 	60 0
A54320.00 01/27/65 0915	5000	6.45 1550	11.4 95	37.0F	7.9 7.0	81	-- 	-- 	4.0 .17	-- 	0.0 .00	42 .69	-- 	1.3 .04	-- 	-- 	.0 	-- 	-- 	32 0
A54320.00 03/10/65 1000	5000	5.15 875	11.4 101	41.0F	7.9 7.1	89	-- 	-- 	4.1 .18	-- 	0.0 .00	48 .79	-- 	0.9 .03	-- 	-- 	.0 	-- 	-- 	37 0
A54320.00 05/12/65 0945	5000	5.69 1130	10.2 104	51.0F	7.4 7.3	77	9.0 .45 57	2.1 .17 22	3.7 .16 20	0.5 .01 1	0.0 .00	41 .67 88	3.0 .06 8	0.6 .02 3	0.6 .01 1	-- 	.0 	22 	63 62	31 0
A54320.00 07/21/65 1010	5000	2.06 78	7.9 98	68.0F	8.3 7.3	162	-- 	-- 	7.5 .33	-- 	2.0 .07	87 1.43	-- 	2.2 .06	-- 	-- 	.0 	-- 	-- 	67 0
A54320.00 09/22/65 0930	5000	2.75 175	9.2 97	54.0F	7.4 7.1	117	13 .65 54	3.5 .29 24	5.3 .23 19	1.5 .04 3	0.0 .00	66 1.08 91	3.0 .06 5	1.4 .04 3	0.4 .01 1	-- 	.0 	24 	86 84	47 0

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. Q	DO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
							CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
B9 5241.20 INDIAN SLOUGH NEAR BRENTWOOD (106)																				
B95241.20 10/13/64 1300	5000			68.0F	8.0	474	-- 	-- 	48 2.09	-- 	0.0 .00	125 2.05	-- 	58 1.64	-- 	--	.4	--	--	120 18
B95241.20 11/18/64 1015	5000			49.0F	8.1	1330	-- 	-- 	168 7.31	-- 	0.0 .00	348 5.71	-- 	171 4.82	-- 	--	2.4	--	--	322 37
B95241.20 12/01/64 1330	5000			58.0F	8.6	1560	-- 	-- 	176 7.66	-- 	28 .93	324 5.31	-- 	190 5.36	-- 	--	2.7	--	--	354 42
B95241.20 01/07/65 1345	5000			51.0F	8.4	936	-- 	-- 	109 4.74	-- 	6.0 .20	180 2.95	-- 	128 3.61	-- 	--	1.5	--	--	210 53
B95241.20 02/08/65 1315	5000			52.0F	8.4	724	-- 	-- 	82 3.57	-- 	2.0 .07	127 2.08	-- 	104 2.93	-- 	--	1.2	--	--	166 59
B95241.20 03/11/65 1400	5000			61.0F	8.4	919	-- 	-- 	109 4.74	-- 	4.0 .13	164 2.69	-- 	132 3.72	-- 	--	1.5	--	--	202 61
B95241.20 04/12/65 1015	5000			56.0F	7.9	659	-- 	-- 	78 3.39	-- 	0.0 .00	116 1.90	-- 	100 2.82	-- 	--	.8	--	--	144 49
B95241.20 05/17/65 1315	5000			72.0F	7.2	327	18 .90 30	8.5 .70 23	32 1.39 46	1.6 .04 1	0.0 .00	71 1.16 37	36 .75 24	42 1.18 38	1.6 .03 1	--	.2	13	182 188	80 22
B95241.20 06/10/65 1315	5000			74.0F	8.2	357	-- 	-- 	36 1.57	-- 	0.0 .00	76 1.25	-- 	47 1.33	-- 	--	.3	--	--	86 24
B95241.20 07/01/65 0930	5000			77.0F	8.2	310	-- 	-- 	31 1.35	-- 	0.0 .00	74 1.21	-- 	40 1.13	-- 	--	.1	--	--	77 17
B95241.20 08/16/65 1215	5000			79.0F	8.0	293	-- 	-- 	28 1.22	-- 	0.0 .00	83 1.36	-- 	34 .96	-- 	--	.2	--	--	74 6
B95241.20 09/01/65 0845	5000			75.0F	7.4	278	16 .80 30	8.5 .70 26	26 1.13 42	1.6 .04 1	0.0 .00	85 1.39 51	20 .42 15	30 .85 31	3.3 .05 2	--	.2	14	168 161	75 6

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. Q	DC	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
B95270.20 ITALIAN SLOUGH, AT MOUTH, NEAR BYRON (106)																					
B95270.20		12.10	7.2	70.0F	8.1	380	19	12	36	2.6	0.0	105	26	48	1.9	--	.1	--	213	97
10/08/64	5000		80		7.4		.95	.99	1.57	.07	.00	1.72	.54	1.35	.03				197	11
0855							27	28	44	2		47	15	37	1					
B95270.20		11.92	7.0	62.0F	7.5	440	22	14	43	2.2	0.0	112	30	62	2.4	--	.2	--	241	114
11/05/64	5000		72		7.3		1.10	1.15	1.87	.06	.00	1.84	.62	1.75	.04				231	22
1015							26	28	45	1		43	15	41	1					
B95270.20		11.59	8.2	55.0F	8.2	613	26	15	64	3.0	0.0	108	53	92	2.5	--	.5	--	329	126
12/03/64	5000		77		7.5		1.30	1.23	2.78	.08	.00	1.77	1.10	2.59	.04				309	38
1120							24	23	52	1		32	20	47	1					
B95270.20		13.91	8.3	51.0F	7.8	751	26	13	89	--	0.0	100	64	121	4.9	--	1.2	--	412	120
01/08/65	5000		74		7.3		1.30	1.07	3.87		.00	1.64	1.33	3.41	.08				368	38
1140							21	17	62			25	21	53	1					
B95270.20		12.10	6.9	49.0F	7.5	653	23	12	87	--	0.0	98	56	116	3.8	0.6	1.3	15	368	108
02/03/65	5000		60		7.7		1.15	.99	3.78		.00	1.61	1.16	3.27	.06				363	28
1005							19	17	64			26	19	54	1					
B95270.20		11.42	9.1	56.0F	7.9	531	21	10	68	1.9	0.0	80	47	90	2.3	--	1.2	15	313	94
03/03/65	5000		87		7.3		1.05	.82	2.96	.05	.00	1.31	.98	2.54	.04				296	29
1025							22	17	61	1		27	20	52	1					
B95270.20			8.9	58.0F	7.5	492	23	13	50	--	0.0	86	49	73	5.2	--	.5	--	280	110
04/08/65	5000		87		7.5		1.15	1.07	2.18		.00	1.41	1.02	2.06	.08				256	40
0935							26	24	50			31	22	45	2					
B95270.20		13.12	9.1	61.0F	8.2	268	17	6.2	26	1.4	0.0	62	26	34	0.5	--	.1	17	159	68
05/06/65	5000		92		7.5		.85	.51	1.13	.04	.00	1.02	.54	.96	.01				159	17
1010							34	20	45	2		40	21	38						
B95270.20		13.17	8.5	67.0F	7.4	165	11	3.0	15	1.2	0.0	39	11	22	3.3	--	.2	--	103	40
06/17/65	5000		92		7.3		.55	.25	.65	.03	.00	.64	.23	.62	.05				86	8
0920							37	17	44	2		42	15	40	3					
B95270.20		10.43	7.5	81.0F	7.5	253	--	--	22	--	0.0	64	--	32	--	--	.1	--	--	68
07/15/65	5000		93		7.3				.96		.00	1.05		.90						16
1245																				
B95270.20			8.3	77.0F	7.7	238	15	7.7	21	--	--	--	18	25	0.5	--	.1	--	152	69
08/13/65	5050		100		7.3		.75	.63	.91				.37	.71	.01					
1045																				
B95270.20				69.0F	8.1	345	26	6.8	32	2.1	0.0	88	30	43	3.9	--	.0	18	204	93
09/17/65	5000				7.4		1.30	.56	1.39	.05	.00	1.44	.62	1.21	.06				205	21
1100							39	17	42	2		43	19	36	2					

TABLE D-2

MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. Q	CO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
B94120.10							B9 4120.10 LITTLE POTATO SLOUGH NEAR TERMINOUS (99)													
B94120.10			8.5	60.0F	8.2	211	--	--	14	--	0.0	85	--	14	--	--	.1	--	--	71
11/09/64	5000		85		7.3				.61		.00	1.39		.39						2
1400																				
B94120.10			10.1	50.0F	7.3	305	--	--	19	--	0.0	48	--	46	--	--	.1	--	--	96
01/05/65	5000		89		7.1				.83		.00	.79		1.30						57
1400																				
B94120.10			9.8	53.0F	7.8	143	--	--	8.5	--	0.0	49	--	13	--	--	.0	--	--	48
03/11/65	5000		90		7.1				.37		.00	.80		.37						8
0930																				
B94120.10			9.3	66.0F	7.0	98	8.2	2.8	5.7	0.8	0.0	30	4.0	12	1.7	--	.0	13	49	32
05/17/65	5000		99		7.1		.41	.23	.25	.02	.00	.49	.08	.34	.03				63	8
1430							45	25	27	2		52	9	36	3					
B94120.10			8.1	73.0F	8.1	160	--	--	11	--	0.0	58	--	13	--	--	.0	--	--	54
07/02/65	5000		95		7.3				.48		.00	.95		.37						7
1345																				
B94120.10			7.0	68.0F	7.5	214	15	8.4	16	1.4	0.0	88	10	17	3.2	--	.0	19	127	72
09/07/65	5000		76		7.1		.75	.69	.70	.04	.00	1.44	.21	.48	.05				133	0
0845							34	32	32	2		66	10	22	2					

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

McCLOUD RIVER ABOVE SHASTA LAKE (STA. 18)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/ b/	Mineral constituents in parts per million / equivalents per million													Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by i
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	N.C. ppm			
10/5/64 1015	882	50	11.3	104	97	7.9 / 8.0	0.74[c]		5.5 / 0.24		0 / 0.00	54 / 0.89		0.9 / 0.03			0.0				24	37	0	1		USGS
11/10 1035	1390	45	11.1	96	98	7.4 / 8.0	0.76[c]		5.0 / 0.22		0 / 0.00	52 / 0.85		1.1 / 0.03			0.0				22	38	0	4		
12/7 1000	1070	46	10.9	95	102	7.5 / 8.1	0.78[c]		5.2 / 0.23		0 / 0.00	58 / 0.95		0.9 / 0.03			0.0				23	39	0	1		
1/65	Inaccessible																									
2/2 1020	2290	43	11.5	96	94	7.4 / 7.8	0.79[c]		4.3 / 0.19		0 / 0.00	50 / 0.82		0.6 / 0.02			0.0				19	40	0	6		
3/2 1010	1550	44	11.4	97	96	7.7 / 7.5	0.79[c]		4.0 / 0.17		0 / 0.00	52 / 0.85		0.6 / 0.02			0.0				18	40	0	4		
4/	Inaccessible																									
5/3 1045	2390	47	11.7	103	87	7.4 / 7.8	11 / 0.55	2.3 / 0.19	3.7 / 0.16	0.5 / 0.01	0 / 0.00	48 / 0.79	3.0 / 0.06	0.6 / 0.02	1.1 / 0.02		0.0	25	ABS 0.0 As 0.00 PO_4 0.05	69[f]	18	37	0	7		
6/	Inaccessible																									
7/	Inaccessible																									
8/10 0930	1138	75	8.9	108	124	8.3 / 8.2	0.92[c]		7.1 / 0.31		0 / 0.00	67 / 1.10		2.4 / 0.07			0.1				25	46	0	3		
9/14 1020	1084	53	11.2	107	96	7.7 / 8.1	8.8 / 0.44	3.5 / 0.29	5.3 / 0.23	1.1 / 0.03	0 / 0.00,	54 / 0.89	1.0 / 0.02	0.9 / 0.03	2.7 / 0.04		0.0	35	ABS 0.0 As 0.00 PO_4 0.10	76[f]	23	36	0	1		

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

MILL CREEK NEAR MOUTH (STA. 88)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micramhos at 25° C)	pH a/ b	Mineral constituents in parts per million / equivalents per million													Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by i
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (No)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	N.C. ppm			
10/7/64 1555	No Flow																									USGS
11/13 1030	70	47	11.4	98	181	7.3 / 8.0	1.00[c]		13. / 0.57		0 / 0.00	46 / 0.75		15. / 0.42			0.5				36	50	12	4		
12/9 1650	65	51	10.3	93	197	7.3 / 8.0	1.08[c]		16. / 0.70		0 / 0.00	52 / 0.85		16. / 0.45			0.6				39	54	11	4		
1/14/65 0940	15	46	10.8	91	131	7.1 / 8.0	0.92[c]		8.5 / 0.37		0 / 0.00	47 / 0.77		8.0 / 0.23			0.3				29	46	7	4		
2/4 1730	90	46	10.8	91	122	7.2 / 8.0	0.72[c]		9.0 / 0.39		0 / 0.00	41 / 0.67		7.7 / 0.22			0.5				35	36	2	3		
3/4 1800	75	50	10.9	97	141	7.3 / 8.0	0.82[c]		10. / 0.44		0 / 0.00	43 / 0.70		10. / 0.28			0.3				35	41	6	1		
4/8 1830	200	48	11.6	101	117	7.3 / 7.2	0.76[c]		0.33		0 / 0.00	46 / 0.75		6.2 / 0.17			0.2				30	38	0	2		
5/6 1045	250	50	9.8	87	111	7.2 / 7.8	9.2 / 0.46	2.7 / 0.22	7.4 / 0.32	1.4 / 0.04	0 / 0.00	34 / 0.56	15. / 0.31	6.3 / 0.18	0.9 / 0.01		0.2	30.	ABS 0.0 As 0.01 PO_4 0.05	90[f]	31	34	6	4		
6/2 1005	60	62	9.8	101	111	7.4 / 8.2	0.66[c]		7.4 / 0.32		0 / 0.00	32 / 0.52		5.8 / 0.16			0.1				33	33	7	15		
7/12 1310	35	74	9.1	106	142	7.9 / 8.1	0.82[c]		9.9 / 0.43		0 / 0.00	39 / 0.64		8.7 / 0.25			0.3				34	41	9	1		
8/9 1300	7	84	11.4	147	193	8.3 / 8.2	1.20[c]		13. / 0.57		0 / 0.00	62 / 1.02		16. / 0.45			0.2				32	60	9	2		
9/8 1330	5	78	11.7	142	199	8.1 / 7.0	14. / 0.70	6.3 / 0.52	15. / 0.65	2.4 / 0.06	0 / 0.00	65 / 1.07	20. / 0.42	17. / 0.48	0.4 / 0.01		0.5	34.	ABS 0.0 As 0.01 PO_4 0.08	143[f]	34	61	8	2		

TABLE D-2

MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME / LAB / SAMPLER	G.H. / Q	CO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
B21170.00 MOKELUMNE RIVER AT LANCHA PLANA (bl Camanche Dam) (23a)																			
B21170.00 11/16/64 5000 1045	4.52 1340	9.9 94	55.0F	7.5 7.1	42	-- 	-- 	2.8 .12 	-- 	0.0 .00 	16 .26 	-- 	1.2 .03 	-- 	-- 	.1 	-- 	-- 	14 1
B21170.00 01/11/65 5000 1345		12.5 109	48.0F	7.4 7.0	42	-- 	-- 	3.0 .13 	-- 	0.0 .00 	18 .30 	-- 	0.8 .02 	-- 	-- 	.1 	-- 	-- 	15 0
B21170.00 03/01/65 5000 1315	5.35 1900	12.3 111	51.0F	7.5 7.0	43	-- 	-- 	2.3 .10 	-- 	0.0 .00 	18 .30 	-- 	1.3 .04 	-- 	-- 	.0 	-- 	-- 	16 1
B21170.00 05/18/65 5000 1300	6.89 1910	11.8 112	55.0F	7.1 6.5	45	4.4 .22 49	1.2 .10 22	2.8 .12 27	0.5 .01 2	0.0 .00 	20 .33 75	3.0 .06 14	1.3 .04 9	0.6 .01 2	-- 	.0 	11 	38 35 	16 0
B21170.00 07/01/65 5000 0900	5.66 1000	11.4 112	58.0F	7.7 7.1	45	-- 	-- 	2.7 .12 	-- 	0.0 .00 	20 .33 	-- 	1.2 .03 	-- 	-- 	.0 	-- 	-- 	16 0
B21170.00 09/02/65 5000 1215	4.68 440	11.5 119	62.0F	8.5 7.1	45	5.2 .26 55	1.2 .10 21	2.1 .09 19	0.7 .02 4	2.0 .07 16	18 .30 67	2.0 .04 9	1.3 .04 9	0.3 .00 	-- 	.0 	8.4 	32 32 	18 0

TABLE D-2

MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. / Q	CO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
							CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
B94300.00 MOKELUMNE RIVER AT WOODBRIDGE (23)																				
B94300.00		4.27	9.9	57.0F	7.4	61	--	--	3.6	--	0.0	26	--	2.1	--	--	.0	--	--	22
11/12/64	5000	72	97		7.1				.16		.00	.43		.06						1
1445																				
B94300.00		13.53	10.6	53.0F	6.9	43	--	--	2.3	--	0.0	17	--	1.0	--	--	.0	--	--	14
01/06/65	5000	1760	97		6.9				.10		.00	.28		.03						0
1015																				
B94300.00		8.36	11.8	48.0F	7.6	43	--	--	2.3	--	0.0	18	--	1.3	--	--	.0	--	--	15
03/01/65	5000	591	102		7.2				.10		.00	.30		.04						0
0845																				
B94300.00		13.23	11.6	52.0F	7.1	50	6.4	0.0	2.3	0.7	0.0	20	3.0	1.5	0.3	--	.0	11	35	16
05/05/65	5000	1680	105		7.1		.32	.00	.10	.02	.00	.33	.06	.04	.00				35	0
1215							73		23	5		77	14	9						
B94300.00		5.82	9.2	69.0F	7.7	48	--	--	2.8	--	0.0	22	--	1.3	--	--	.2	--	--	18
07/13/65	5000	221	102		7.3				.12		.00	.36		.04						0
1400																				
B94300.00		6.40	9.7	65.0F	7.2	46	6.0	0.4	2.2	0.6	0.0	21	2.0	1.2	0.6	--	.0	12	36	16
09/15/65	5000	293	102		7.1		.30	.03	.10	.02	.00	.34	.04	.03	.01				35	0
1200							67	7	22	4		81	10	7	2					

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. G	EC	TEMP	LAB-PH / FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
B95340.00 OLD RIVER AT CLIFTON COURT FERRY (104)																				
B95340.00		3.62	7.3	73.0F	8.1	400	--	--	38	--	0.0	109	--	50	--	--	.1	--	--	106
10/08/64	5000		84		7.3				1.65		.00	1.79		1.41						17
1100																				
B95340.00		4.35	8.3	57.0F	8.2	779	--	--	90	--	0.0	134	--	126	--	--	.4	--	--	168
11/11/64	5000		80		7.5				3.92		.00	2.20		3.55						58
1315																				
B95340.00		12.05	7.9	54.0F	8.2	631	--	--	66	--	0.0	106	--	96	--	--	.4	--	--	136
12/10/64	5000		73		7.3				2.87		.00	1.74		2.71						49
1345																				
B95340.00		13.86	9.5	50.0F	8.0	230	--	--	21	--	0.0	58	--	24	--	--	.2	--	--	59
01/07/65	5000		84		7.1				.91		.00	.95		.68						12
1300																				
B95340.00		11.10	10.0	48.0F	8.1	291	--	--	30	--	0.0	62	--	36	--	--	.2	--	--	69
02/03/65	5000		86		7.1				1.31		.00	1.02		1.02						18
1345																				
B95340.00		10.34	10.3	57.0F	8.0	325	--	--	32	--	0.0	60	--	46	--	--	.1	--	--	76
03/04/65	5000		99		7.3				1.39		.00	.98		1.30						27
1315																				
B95340.00		6.90	10.1	55.0F	7.7	305	--	--	31	--	0.0	62	--	43	--	--	.1	--	--	72
04/08/65	5000		95		7.5				1.35		.00	1.02		1.21						21
1315																				
B95340.00		5.22	10.1	61.0F	7.9	300	18	7.1	30	1.4	0.0	66	31	40	0.6	--	.1	17	175	74
05/06/65	5000		102		7.5		.90	.58	1.31	.04	.00	1.08	.64	1.13	.01				178	20
1200							32	20	46	1		38	22	40						
B95340.00		4.32	8.4	66.0F	7.9	146	--	--	12	--	0.0	36	--	19	--	--	.0	--	--	39
06/17/65	5000		90		7.3				.52		.00	.59		.54						10
1215																				
B95340.00		11.44	6.5	78.0F	7.6	236	--	--	19	--	0.0	63	--	28	--	--	.0	--	--	71
07/15/65	5000		79		7.3				.83		.00	1.03		.79						20
1035																				
B95340.00		2.68	6.7	69.0F	8.3	307	--	--	28	--	1.0	81	--	40	--	--	.1	--	--	83
08/12/65	5000		74		8.1				1.22		.03	1.33		1.13						15
1245																				
B95340.00		5.55	7.3	73.0F	7.7	313	24	6.8	28	1.8	0.0	83	28	36	3.0	--	.0	15	180	88
09/16/65	5000		84		7.5		1.20	.56	1.22	.05	.00	1.36	.58	1.02	.05				183	20
1145							40	18	40	2		45	19	34	2					

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. Q	DO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
B9 5110.20 OLD RIVER AT MANDEVILLE ISLAND (112)																				
B95110.20		6.55	8.9	62.0F	8.0	274	--	--	22	--	0.0	95	--	26	--	--	.1	--	--	83
10/13/64	5000		91		7.7				.96		.00	1.56		.73						5
1145																				
B95110.20		5.90	9.8	53.0F	8.2	368	--	--	32	--	0.0	100	--	45	--	--	.1	--	--	107
11/16/64	5000		90		7.5				1.39		.00	1.64		1.27						25
1430																				
B95110.20		5.46	9.1	54.0F	8.2	489	--	--	44	--	0.0	106	--	64	--	--	.3	--	--	119
12/01/64	5000		85		7.3				1.91		.00	1.74		1.80						32
1230																				
B95110.20		7.77	9.1	50.0F	8.0	315	--	--	26	--	0.0	55	--	35	--	--	.2	--	--	85
01/11/65	5000		80		7.1				1.13		.00	.90		.99						40
1100																				
B95110.20		6.40	10.3	50.0F	8.0	312	--	--	28	--	0.0	62	--	38	--	--	.4	--	--	82
02/08/65	5000		91		7.1				1.22		.00	1.02		1.07						31
1130																				
B95110.20		5.72	10.0	57.0F	7.9	302	--	--	28	--	0.0	60	--	39	--	--	.1	--	--	78
03/11/65	5000		96		7.3				1.22		.00	.98		1.10						29
1300																				
B95110.20		3.60	11.1	61.0F	7.7	284	--	--	26	--	0.0	60	--	36	--	--	.1	--	--	76
04/01/65	5000		112		7.3				1.13		.00	.98		1.02						27
1245																				
B95110.20		4.44	8.7	58.0F	7.4	182	12	5.4	14	1.4	0.0	52	16	20	1.8	--	.1	14	101	52
05/17/65	5000		85		7.3		.60	.44	.61	.04	.00	.85	.33	.56	.03				110	10
1015							36	26	36	2		48	19	32	2					
B95110.20		3.10	8.6	73.0F	8.1	200	--	--	17	--	0.0	54	--	22	--	--	.0	--	--	56
06/10/65	5000		99		7.3				.74		.00	.89		.62						12
1200																				
B95110.20		5.00	7.8	73.0F	8.1	168	--	--	12	--	0.0	58	--	15	--	--	.0	--	--	54
07/02/65	5000		90		7.3				.52		.00	.95		.42						7
1030																				
B95110.20		4.03	8.1	76.0F	8.4	198	--	--	16	--	1.0	67	--	20	--	--	.1	--	--	58
08/02/65	5000		96		7.5				.70		.03	1.10		.56						2
1215																				
B95110.20		2.65	7.9	71.0F	7.5	218	20	4.6	17	1.8	0.0	82	15	19	1.0	--	.0	17	131	69
09/07/65	5000		89		7.5		1.00	.38	.74	.05	.00	1.34	.31	.54	.02				136	2
1100							46	18	34	2		61	14	24	1					

TABLE D-2

MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME / LAB / SAMPLER	G.H.Q	DO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
						CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
B95320.20					B95320.20	OLD RIVER AT ORWOOD BRIDGE (108)													
B95320.20 10/13/64 5000 1330		7.6 85	68.0F	7.5 7.4	321	--	--	30 1.31	--	0.0 .00	103 1.69	--	37 1.04	--	--	.1	--	--	91 7
B95320.20 11/18/64 5000 0945		9.0 80	50.0F	8.1 7.4	775	--	--	84 3.65	--	0.0 .00	124 2.03	--	119 3.36	--	--	.4	--	--	166 65
B95320.20 12/01/64 5000 1400		8.4 79	55.0F	8.1 7.3	501	--	--	52 2.26	--	0.0 .00	90 1.48	--	71 2.00	--	--	.3	--	--	115 41
B95320.20 01/11/65 5000 0945		9.6 83	48.0F	7.7 7.0	185	--	--	14 .61	--	0.0 .00	46 .75	--	17 .48	--	--	.2	--	--	52 15
B95320.20 02/08/65 5000 1345		9.8 88	51.0F	8.0 7.3	406	--	--	41 1.78	--	0.0 .00	67 1.10	--	54 1.52	--	--	.6	--	--	97 42
B95320.20 03/11/65 5000 1430		9.0 89	59.0F	8.0 7.1	317	--	--	30 1.31	--	0.0 .00	56 .92	--	43 1.21	--	--	.1	--	--	75 29
B95320.20 04/12/65 5000 0930		10.1 95	55.0F	7.6 7.3	284	--	--	29 1.26	--	0.0 .00	59 .97	--	38 1.07	--	--	.1	--	--	69 21
B95320.20 05/17/65 5000 1245		7.7 86	70.0F	7.3 7.3	264	16 .80 33	6.8 .56 23	24 1.04 43	1.5 .04 2	0.0 .00	61 1.00 39	28 .58 23	33 .93 37	1.8 .03 1	--	.1	14	156 155	68 18
B95320.20 06/10/65 5000 1345		7.4 84	72.0F	8.1 7.2	259	--	--	23 1.00	--	0.0 .00	60 .98	--	33 .93	--	--	.1	--	--	67 18
B95320.20 07/02/65 5000 0845		7.4 87	75.0F	7.7 7.3	203	--	--	18 .78	--	0.0 .00	58 .95	--	24 .68	--	--	.0	--	--	58 11
B95320.20 09/01/65 5000 0915		6.8 80	75.0F	7.7 7.7	229	16 .80 36	6.6 .54 24	19 .83 38	1.6 .04 2	0.0 .00	80 1.31 59	13 .27 12	22 .62 28	1.4 .02 1	--	.1	14	146 133	67 2

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. Q	CC	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
							CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
B95380.00 OLD RIVER NEAR TRACY (103)																				
B95380.00 10/08/64 1030	5000	6.47	8.3 92	69.0F	8.2 8.1	1270	-- -- --	-- -- --	139 6.05 --	-- -- --	0.0 .00 --	216 3.54 --	-- -- --	222 6.26 --	-- -- --	-- -- --	.4 -- --	-- -- --	-- -- --	304 127 --
B95380.00 11/11/64 1245	5000	5.88	7.4 71	56.0F	7.8 7.5	854	-- -- --	-- -- --	94 4.09 --	-- -- --	0.0 .00 --	149 2.44 --	-- -- --	129 3.64 --	-- -- --	-- -- --	.6 -- --	-- -- --	-- -- --	182 60 --
B95380.00 12/10/64 1300	5000	12.00	5.1 48	55.0F	7.2 7.3	745	-- -- --	-- -- --	78 3.39 --	-- -- --	0.0 .00 --	127 2.08 --	-- -- --	110 3.10 --	-- -- --	-- -- --	.4 -- --	-- -- --	-- -- --	162 58 --
B95380.00 01/07/65 1130	5000	15.01	9.2 81	50.0F	7.5 7.1	276	-- -- --	-- -- --	24 1.04 --	-- -- --	0.0 .00 --	60 .98 --	-- -- --	33 .93 --	-- -- --	-- -- --	.1 -- --	-- -- --	-- -- --	70 21 --
B95380.00 02/03/65 1315	5000	12.14	9.6 83	48.0F	8.0 7.1	344	-- -- --	-- -- --	34 1.48 --	-- -- --	0.0 .00 --	70 1.15 --	-- -- --	44 1.24 --	-- -- --	-- -- --	.1 -- --	-- -- --	-- -- --	81 24 --
B95380.00 03/04/65 1130	5000	5.10	9.5 89	55.0F	8.0 7.3	358	-- -- --	-- -- --	34 1.48 --	-- -- --	0.0 .00 --	64 1.05 --	-- -- --	51 1.44 --	-- -- --	-- -- --	.2 -- --	-- -- --	-- -- --	83 31 --
B95380.00 04/08/65 1345	5000	6.12	10.1 95	55.0F	7.6 7.3	410	-- -- --	-- -- --	43 1.87 --	-- -- --	0.0 .00 --	78 1.28 --	-- -- --	58 1.64 --	-- -- --	-- -- --	.2 -- --	-- -- --	-- -- --	97 33 --
B95380.00 05/06/65 1030	5000	6.48	10.8 107	59.0F	7.6 7.9	358	20 1.00 30	8.8 .72 22	36 1.57 47	1.9 .05 1	0.0 .00 --	74 1.21 36	34 .71 21	49 1.38 41	1.8 .03 1	-- -- --	.1 -- --	17 -- --	213 205 --	86 26 --
B95380.00 06/17/65 1100	5000	6.19	8.2 87	65.0F	7.1 7.1	217	-- -- --	-- -- --	18 .78 --	-- -- --	0.0 .00 --	46 .75 --	-- -- --	32 .90 --	-- -- --	-- -- --	.0 -- --	-- -- --	-- -- --	57 20 --
B95380.00 07/15/65 0950	5000	13.12	8.7 105	78.0F	8.3 7.9	698	-- -- --	-- -- --	71 3.09 --	-- -- --	3.0 .10 --	119 1.95 --	-- -- --	124 3.50 --	-- -- --	-- -- --	.2 -- --	-- -- --	-- -- --	166 64 --
B95380.00 08/12/65 1200	5000	3.85	5.8 69	77.0F	8.3 7.9	939	-- -- --	-- -- --	99 4.31 --	-- -- --	2.0 .07 --	166 2.72 --	-- -- --	174 4.91 --	-- -- --	-- -- --	.2 -- --	-- -- --	-- -- --	228 89 --
B95380.00 09/16/65 1045	5000	5.31	10.4 118	72.0F	7.9 8.7	789	43 2.15 29	19 1.56 21	82 3.57 48	4.4 .11 1	0.0 .00 --	154 2.53 34	60 1.25 17	129 3.64 49	4.6 .07 1	-- -- --	.1 -- --	21 -- --	480 439 --	184 58 --

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

PAYNES CREEK NEAR RED BLUFF (STA. 88g)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micramhos at 25°C)	pH a/b	Mineral constituents in parts per million / equivalents per million													Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by i
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	N.C. ppm			
10/7/64 1500	15	66	9.5	102	253	7.4 / 8.2	1.62[c]		21. / 0.91		0 / 0.00	124 / 2.03		20. / 0.56			0.5				36	81	0	1		USGS
11/12 1800	38	52	9.6	88	128	7.4 / 7.9	0.92[c]		7.8 / 0.34		0 / 0.00	72 / 1.18		4.4 / 0.12			0.2				27	46	0	.7		
12/9 1520	20	55	9.8	93	200	7.4 / 8.2	1.42[c]		15. / 0.65		0 / 0.00	105 / 1.72		10. / 0.28			0.3				31	71	0	1		
1/14/65 1215	75	47	10.5	90	110	7.3 / 8.2	0.84[c]		7.0 / 0.30		0 / 0.00	58 / 0.95		2.5 / 0.07			0.1				26	42	0	4		
2/4 1620	30	50	8.4	75	150	7.3 / 8.2	1.08[c]		10. / 0.44		0 / 0.00	78 / 1.28		5.8 / 0.16			0.2				29	54	0	2		
3/4 1620	30	58	8.7	86	172	8.2 / 8.8	1.20[c]		12. / 0.52		13 / 0.43	64 / 1.05		7.0 / 0.20			0.2				30	60	0	6		
4/8 1630	55	53	9.7	90	76	7.1 / 7.6	0.61[c]		3.9 / 0.17		0 / 0.00	42 / 0.69		1.1 / 0.03			0.0				22	30	0	6		
5/6 0910	70	62	9.2	95	162	7.8 / 8.2	13. / 0.65	6.4 / 0.53	11. / 0.48	1.4 / 0.04	0 / 0.00	85 / 1.39	2.0 / 0.04	6.0 / 0.17	1.7 / 0.03		0.2	46.	ABS 0.0 As 0.00 PO_4 0.15	125[f]	28	59	0	2		
6/2 1230	20	69	8.4	94	178	8.0 / 8.4	1.24[c]		13. / 0.57		2 / 0.07	88 / 1.44		8.6 / 0.24			0.2				31	62	0	1		
7/15 1800	15	77	8.2	99	191	7.9 / 8.4	1.32[c]		13. / 0.57		2 / 0.07	88 / 1.44		12. / 0.34			0.2				30	66	0	2		
8/12 1725	15	75	8.6	102	225	7.8 / 8.5	1.50[c]		17. / 0.74		4 / 0.13	105 / 1.72		16. / 0.45			0.4				33	75	0	1		
9/8 1500	10	72	13.6	157	208	8.2 / 8.6	12. / 0.60	10. / 0.84	16. / 0.70	1.1 / 0.03	8 / 0.27	91 / 1.49	1.0 / 0.02	13. / 0.37	0.4 / 0.01		0.3	45.	ABS 0.0 As 0.00 PO_4 0.08	159[f]	32	72	0	1		

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

PIT RIVER NEAR CANBY (STA. 17a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by[i]
10/6/64 1710	84	65	9.6	117	327	8.0 / 8.0	—[c] / 1.92		34. / 1.48		0 / 0.00	168 / 2.75		10. / 0.28			0.3				44	96	0	20	Median 1380	USGS
11/12 0845	82	38	11.5	100	284	8.1 / 8.3	—[c] / 1.72		27. / 1.17		2 / 0.07	153 / 2.51		7.1 / 0.20			0.0				40	86	0	20	Maximum 24000	
12/9 0920	185	40	8.8	79	279	7.6 / 8.3	—[c] / 1.60		26. / 1.13		2 / 0.07	142 / 2.33		6.1 / 0.17			0.1				41	80	0	30	Minimum .62	
1/19/65 1230	1000	34	11.0	90	195	7.4 / 7.9	—[c] / 1.26		16. / 0.70		0 / 0.00	91 / 1.49		5.9 / 0.17			0.1				36	63	0	40		
2/4 0845	1800	37	10.5	90	161	7.4 / 7.9	—[c] / 1.04		14. / 0.61		0 / 0.00	76 / 1.25		4.0 / 0.11			0.1				37	52	0	40		
3/4 0840	395	42	7.9	73	189	7.7 / 8.2	—[c] / 1.22		14. / 0.61		0 / 0.00	91 / 1.49		3.7 / 0.10			0.2				33	61	0	30		
4/8 0900	415	45	9.7	93	185	7.7 / 8.0	—[c] / 1.28		14. / 0.61		0 / 0.00	92 / 1.51		4.0 / 0.11			0.0				32	64	0	30		
5/5 1145	792	49	8.5	86	147	7.7 / 8.1	13. / 0.65	4.5 / 0.37	10. / 0.44	2.3 / 0.06	0 / 0.00	78 / 1.28	7.0 / 0.15	1.9 / 0.05	1.1 / 0.02		0.0	29.	ABS 0.0 As 0.00 PO_4 0.20	108[f]	29	51	0	30		
6/16 0930	385	56	6.9	76	222	7.8 / 8.3	—[c] / 1.56		17. / 0.74		2 / 0.07	126 / 2.07		2.4 / 0.07			0.1				32	78	0	35		
7/15 0915	32	69	7.7	99	208	7.8 / 8.3	—[c] / 1.38		18. / 0.78		2 / 0.07	108 / 1.77		4.9 / 0.14			0.0				36	69	0	25		
8/12 1110	137	66	7.4	92	221	7.6 / 8.2	—[c] / 1.42		18. / 0.78		0 / 0.00	119 / 1.95		4.5 / 0.13			0.2				35	71	0	30		
9/16 0900	222	58	8.1	92	269	8.1 / 7.7	21. / 1.05	8.1 / 0.67	24. / 1.04	5.9 / 0.15	0 / 0.00	154 / 2.52	9.0 / 0.19	4.2 / 0.12	2.9 / 0.05		0.1	36.	ABS 0.0 As 0.01 PO_4 0.52	207[f]	36	86	0	30		

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

PIT RIVER NEAR MONTGOMERY CREEK (STA. 17)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million / equivalents per million													Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by[i]
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	N.C. ppm			
10/9/64 0840	750	58	9.7	98	161	8.0 / 8.1	___ / 1.14[c]		12. / 0.52		0 / 0.00	91 / 1.49		3.4 / 0.10			0.1				31	57	0	1		USGS
11/9 1030		51	10.7	100	156	7.8 / 8.1	___ / 1.10[c]		11. / 0.48		0 / 0.00	84 / 1.38		3.1 / 0.09			0.0				30	55	0	30		
12/10 1430	3350	47	10.2	90	168	7.5 / 8.1	___ / 1.10[c]		12 / 0.52		0 / 0.00	93 / 1.52		3.0 / 0.08			0.1				32	55	0	4		
1/65	Inaccessible																									
2/1 1230		44	11.7	99	132	7.3 / 7.9	___ / 0.96[c]		9.4 / 0.41		0 / 0.00	68 / 1.11		2.5 / 0.07			0.0				30	48	0	35		
3/1 1100		45	10.2	88	147	7.6 / 8.2	___ / 1.06[c]		9.7 / 0.42		0 / 0.00	80 / 1.31		2.2 / 0.06			0.1				28	53	0	25		
4/5 1235		52	9.5	90	140	7.8 / 8.0	___ / 1.02[c]		9.4 / 0.41		0 / 0.00	79 / 1.29		2.3 / 0.06			0.0				29	51	0	16		
5/5 0935		56	9.5	94	130	7.2 / 8.0	13 / 0.65	4.3 / 0.35	7.8 / 0.34	1.5 / 0.04	0 / 0.00	74 / 1.21	3.0 / 0.06	2.0 / 0.06	1.6 / 0.03		0.0	29	ABS 0.0 As 0.01 PO_4 0.15	98[f]	25	50	0	15		
6/3 0835		62	8.1	86	155	8.0 / 8.4	___ / 1.10[c]		11 / 0.48		2 / 0.07	83 / 1.36		2.5 / 0.07			0.1				30	55	0	5		
7/6 1345		67	9.6	108	164	7.7 / 7.9	___ / 1.18[c]		11 / 0.48		0 / 0.00	92 / 1.51		2.9 / 0.08			0.0				29	59	0	10		
8/12 0915		68	8.0	91	155	7.7 / 8.2	___ / 1.10[c]		10 / 0.44		0 / 0.00	87 / 1.43		0.2 / 0.01			0.1				29	55	0	2		
9/7 1120		66	9.1	101	163	8.0 / 8.2	13 / 0.65	6.2 / 0.51	11 / 0.48	2.6 / 0.07	0 / 0.00	92 / 1.51	4.0 / 0.08	3.5 / 0.10	2.3 / 0.04		0.1	32	ABS 0.0 As 0.00 PO_4 0.19	108[f]	28	58	0	5		

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

PIT RIVER, SOUTH FORK NEAR LIKELY (STA. 18a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micramhos at 25°C)	pH a/b	Mineral constituents in parts per million / equivalents per million												Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by i
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	N.C. ppm			
10/7/64 0800	30	55	9.0	100	141	8.0 / 8.1	1.08[c]		8.5 / 0.37		0 / 0.00	83 / 1.36		1.2 / 0.03			0.0				26	54	0	20		USGS
11/12 1040	35	37	10.9	94	108	7.7 / 8.0	0.82[c]		5.6 / 0.24		0 / 0.00	64 / 1.05		0.6 / 0.02			0.0				23	41	0	3		
12/9 1050	95	38	10.2	90	120	7.7 / 7.6	0.90[c]		6.6 / 0.29		0 / 0.00	65 / 1.07		0.9 / 0.03			0.1				24	45	0	10		
1/20/65 1000	85	37	11.0	96	109	7.5 / 7.7	0.88[c]		5.4 / 0.23		0 / 0.00	63 / 1.03		1.0 / 0.03			0.0				21	44	0	4		
2/4 1005	138	37	9.7	85	118	7.5 / 7.9	0.88[c]		7.5 / 0.33		0 / 0.00	65 / 1.07		1.3 / 0.04			0.0				27	44	0	40		
3/4 0955	48	40	10.2	92	112	7.9 / 7.8	0.90[c]		5.5 / 0.24		0 / 0.00	64 / 1.05		0.5 / 0.01			0.0				21	45	0	5		
4/8 1000	597	45	8.3	81	115	7.8 / 7.9	0.90[c]		6.9 / 0.30		0 / 0.00	66 / 1.08		0.9 / 0.03			0.0				25	45	0	6		
5/5 1305	405	47	9.4	94	91	7.6 / 7.8	11 / 0.55	1.8 / 0.15	4.9 / 0.21	1.8 / 0.05	0 / 0.00	48 / 0.79	2.0 / 0.04	0.9 / 0.03	1.9 / 0.03		0.0	29	ABS 0.1 As 0.01 PO_4 0.15	85[f]	22	35	0	30		
6/17 0830	210	49	7.8	80	88	7.5 / 8.1	0.71[c]		4.2 / 0.18		0 / 0.00	50 / 0.82		0.3 / 0.01			0.1				20	36	0	5		
7/15 1130	53	65	8.9	111	99	8.2 / 8.1	0.84[c]		4.9 / 0.21		0 / 0.00	58 / 0.95		0.5 / 0.01			0.0				20	42	0	5		
8/12 1245	18	66	8.5	107	124	8.1 / 8.2	0.92[c]		7.0 / 0.30		0 / 0.00	70 / 115		5.6 / 0.16			0.0				25	46	0	30		
9/16 1000	72	59	9.6	112	136	8.1 / 8.2	12 / 0.60[c]	4.6 / 0.38	9.0 / 0.39	3.1 / 0.08	0 / 0.00	76 / 1.25	4.0 / 0.08	1.2 / 0.03	1.9 / 0.03		0.1	32	ABS 0.0 As 0.00 PO_4 0.25	106[f]	27	49	0	25		

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

RED BANK CREEK NEAR RED BLUFF (STA. 88d)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH a/ b	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform h MPN/ml	Analyzed by i
10/64	No Flow																									USGS
11/12 1550		56	10.0	97	332	8.2 / 8.1	3.00 c		11 / 0.48		0 / 0.00	149 / 2.44		8.1 / 0.23			0.1				14	150	28	120		
12/10 1320		53	11.3	106	589	8.1 / 8.3	5.54 c		21 / 0.91		3 / 0.10	257 / 4.21		22 / 0.62			0.1				14	277	61	1		
1/14/65 1615		51	10.9	99	487	8.2 / 8.6	4.92 c		15 / 0.65		12 / 0.40	237 / 3.88		5.1 / 0.14			0.0				12	246	32	10		
2/3 1310		52	12.0	111	491	8.1 / 8.5	4.90 c		15 / 0.65		7 / 0.23	246 / 4.03		5.6 / 0.16			0.0				12	245	32	1		
3/2 1150		56	9.5	92	532	7.9 / 8.4	5.28 c		16 / 0.70		8 / 0.27	260 / 4.26		8.7 / 0.27			0.0				12	264	38	1		
4/6 1520		55	10.9	104	519	8.1 / 8.4	5.08 c		16 / 0.70		8 / 0.27	246 / 4.03		9.1 / 0.26			0.1				12	254	39	2		
5/5 0930		56	10.6	103	517	8.2 / 8.4	54 / 2.69	30 / 2.45	16 / 0.70	0.8 / 0.02	10 / 0.33	261 / 4.28	52 / 1.08	5.5 / 0.16	1.8 / 0.03		0.0	15	ABS 0.0 As 0.00 PO_4 0.00	310 f	12	257	27	3		
6/17 1245		70	9.1	103	462	7.9 / 8.4	4.36 c		17 / 0.74		4 / 0.13	224 / 3.67		11 / 0.31			0.1				15	218	28	2		
7/	No Flow																									
8/	No Flow																									
9/	No Flow																									

TABLE D-2

MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. O	DO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
B95220.00 ROCK SLOUGH NEAR KNIGHTSEN (109)																				
B95220.00		3.67	7.4	70.0F	8.0	301	--	--	28	--	0.0	100	--	32	--	--	.1	--	--	86
10/08/64	5000		83		7.4				1.22		.00	1.64		.90						4
1230																				
B95220.00		5.40	8.7	57.0F	8.2	389	--	--	38	--	0.0	106	--	48	--	--	.2	--	--	102
11/11/64	5000		84		7.3				1.65		.00	1.74		1.35						15
1400																				
B95220.00		11.37	8.2	55.0F	8.4	688	--	--	75	--	4.0	116	--	109	--	--	.6	--	--	153
12/10/64	5000		77		7.3				3.26		.13	1.90		3.07						52
1430																				
B95220.00		13.15	9.9	50.0F	7.9	497	--	--	54	--	0.0	75	--	68	--	--	.4	--	--	108
01/07/65	5000		87		7.3				2.35		.00	1.23		1.92						47
1430																				
B95220.00		11.48	8.0	48.0F	8.2	616	--	--	70	--	0.0	98	--	87	--	--	.8	--	--	140
02/03/65	5000		69		7.1				3.05		.00	1.61		2.45						60
1430																				
B95220.00		3.67	8.9	58.0F	8.1	513	--	--	54	--	0.0	88	--	73	--	--	.4	--	--	116
03/04/65	5000		87		7.3				2.35		.00	1.44		2.06						44
1415																				
B95220.00		4.22	8.5	58.0F	7.4	473	--	--	50	--	0.0	79	--	67	--	--	.3	--	--	111
04/07/65	5000		83		7.3				2.18		.00	1.30		1.89						46
1400																				
B95220.00		4.17	8.6	58.0F	7.4	243	15	6.4	22	1.2	0.0	62	23	28	1.3	--	.1	14	147	64
05/06/65	5000		84		7.3		.75	.53	.96	.03	.00	1.02	.48	.79	.02				141	13
1300							33	23	42	1		44	21	34	1					
B95220.00		3.43	7.0	72.0F	8.2	294	--	--	29	--	0.0	68	--	38	--	--	.1	--	--	72
06/17/65	5000		80		7.3				1.26		.00	1.12		1.07						16
1315																				
B95220.00		2.34	7.0	81.0F	8.1	210	--	--	16	--	0.0	68	--	20	--	--	.0	--	--	62
07/15/65	5000		87		7.3				.70		.00	1.12		.56						6
1350																				
B95220.00		2.23	6.1	76.0F	8.4	268	--	--	25	--	2.0	80	--	30	--	--	.1	--	--	73
08/12/65	5000		72		7.3				1.09		.07	1.31		.85						4
1330																				
B95220.00		4.68	7.4	72.0F	7.9	236	18	6.3	19	1.8	0.0	84	17	22	1.3	--	.0	15	143	71
09/16/65	5000		84		7.5		.90	.52	.83	.05	.00	1.38	.35	.62	.02				142	2
1245							39	23	36	2		58	15	26	1					

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER AT BEND (STA. 12c)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million / equivalents per million													Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by i
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	N.C. ppm			
10/8/64 0800	5,610	58	10.0	98	124	7.3 / 8.1	1.02[c]		6.5 / 0.28		0 / 0.00	71 / 1.16		2.0 / 0.06	2.0 / 0.03		0.1		PO_4 0.10		22	51	0	1	Median 341.	USGS
11/9 1340	7,970	55	9.6	91	133	7.1 / 8.0	1.00[c]		7.1 / 0.31		0 / 0.00	61 / 1.00		4.4 / 0.12	4.1 / 0.07		0.0		PO_4 0.15		24	50	0	25	Maximum 24,000	
12/10 0930	5,480	52	10.2	93	157	7.3 / 8.1	1.16[c]		8.4 / 0.37		0 / 0.00	75 / 1.23		4.0 / 0.11	1.2 / 0.02		0.0		PO_4 0.10		24	58	0	1	Minimum 6.2	
1/14/65 1415	25,800	48	9.7	84	122	7.2 / 7.8	0.96[c]		6.4 / 0.28		0 / 0.00	59 / 0.97		2.3 / 0.06	1.8 / 0.03		0.0		PO_4 0.20		23	48	0	70		
2/1 1500	25,000	47	11.4	98	116	7.2 / 8.1	0.90[c]		5.5 / 0.24		0 / 0.00	59 / 0.97		1.2 / 0.03	1.2 / 0.02		0.0		PO_4 0.10		21	45	0	60		
3/1 1420	6,340	49	9.8	86	133	7.3 / 8.1	1.04[c]		5.9 / 0.26		0 / 0.00	63 / 1.03		2.4 / 0.07	1.3 / 0.02		0.0		PO_4 0.05		20	52	0	20		
4/5 1500	5,980	53	8.8	82	135	7.4 / 7.9	1.06[c]		7.0 / 0.30		0 / 0.00	64 / 1.05		3.4 / 0.10	0.8 / 0.01		0.0		PO_4 0.25		22	53	1	20		
5/6 1235	7,670	53	10.0	93	133	7.4 / 8.0	11. / 0.55	6.0 / 0.49	6.4 / 0.28	0.9 / 0.02	0 / 0.00	64 / 1.05	10. / 0.21	2.8 / 0.08	0.6 / 0.01		0.0	22.	ABS 0.0 As 0.00 PO_4 0.05	96[f]	21	52	0	20		
6/14 0930	9,150	54	9.5	89	121	7.4 / 8.1	0.96[c]		6.0 / 0.26		0 / 0.00	60 / 0.98		2.8 / 0.08	1.2 / 0.02		0.0		PO_4 0.10		21	48	0	25		
7/12 1530	9,230	56	10.9	105	117	7.6 / 8.2	0.90[c]		5.9 / 0.26		0 / 0.00	61 / 1.00		2.1 / 0.06	2.2 / 0.04		0.0		PO_4 0.15		22	45	0	3		
8/9 1600	11,600	56	10.9	105	112	7.4 / 8.2	0.88[c]		5.1 / 0.22		0 / 0.00	59 / 0.97		2.2 / 0.06	2.4 / 0.04		0.1		PO_4 0.05		20	44	0	15		
9/13 1230	9,520	54	10.7	100	115	7.4 / 7.7	10. / 0.50	4.9 / 0.40	5.4 / 0.23	1.2 / 0.03	0 / 0.00	59 / 0.97	5.0 / 0.10	2.0 / 0.06	2.3 / 0.04		0.0	21.	ABS 0.0 As 0.00 PO_4 0.01	83[f]	20	45	0	5		

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER AT BUTTE CITY (STA. 87a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25° C)	pH a/b	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as $CoCO_3$ Total ppm	Hardness as $CoCO_3$ N.C. ppm	Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by i
							equivalents per million																			
10/5/64 1600	5,360	67	9.7	105	145	7.8 / 7.8	—[c] / 1.12		6.7 / 0.29		0 / 0.00	77 / 1.26		2.3 / 0.06			0.0				21	56	0	1		USGS
11/11 1615	19,000	51	10.3	92	117	- / 7.6	—[c] / 0.88		5.7 / 0.25		0 / 0.00	47 / 0.77		3.6 / 0.10			0.1				22	44	5	180		
12/9 1345	5,360	53	10.4	95	177	7.6 / 7.9	—[c] / 1.32		9.3 / 0.40		0 / 0.00	82 / 1.34		5.9 / 0.17			0.1				23	66	0	4		
1/13/65 1130	41,200	49	10.8	94	140	7.4 / 8.2	—[c] / 1.14		6.6 / 0.29		0 / 0.00	67 / 1.10		3.1 / 0.09			0.1				20	57	2	80		
2/2 1040	32,800	48	10.8	93	135	7.3 / 7.8	—[c] / 1.08		6.4 / 0.28		0 / 0.00	65 / 1.07		2.1 / 0.06			0.1				21	54	1	100		
3/1 1120	8,900	54	10.0	93	164	7.3 / 7.7	—[c] / 1.31		7.5 / 0.33		0 / 0.00	80 / 1.31		4.3 / 0.12			0.0				20	66	0	30		
4/5 1325	7,380	55	9.9	93	154	7.4 / 8.0	—[c] / 1.22		7.5 / 0.33		0 / 0.00	72 / 1.18		4.3 / 0.12			0.1				21	61	2	20		
5/3 1225	9,210	59	9.7	96	152	7.4 / 7.8	14 / 0.70	6.6 / 0.54	7.0 / 0.30	0.9 / 0.02	0 / 0.00	73 / 1.20	11 / 0.23	3.6 / 0.10	3.4 / 0.05		0.1	21	ABS 0.1 As 0.00 PO_4 0.05	104[f]	19	62	2	30		
6/16 1230	7,140	65	10.0	105	136	7.3 / 8.5	—[c] / 1.08		6.9 / 0.30		2 / 0.07	64 / 1.05		3.0 / 0.08			0.2				22	54	0	20		
7/14 1155	8,660	68	9.5	104	126	7.3 / 8.2	—[c] / 0.96		6.9 / 0.30		0 / 0.00	64 / 1.05		2.5 / 0.07			0.0				24	48	0	12		
8/11 1320	9,820	64	9.4	98	121	7.3 / 8.4	—[c] / 0.96		6.2 / 0.27		0 / 0.00	64 / 1.05		2.4 / 0.07			0.0				22	48	0	14		
9/15 1245	8,640	65	9.8	103	124	7.4 / 7.7	11 / 0.55	5.2 / 0.43	6.0 / 0.26	0.9 / 0.02	0 / 0.00	65 / 1.07	4.0 / 0.08	2.6 / 0.07	0.6 / 0.01		0.0	20	ABS 0.0 As 0.00 PO_4 0.04	83[f]	21	49	0	5		

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER AT COLUSA (STA. 13b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million / equivalents per million												Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by i
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	N.C. ppm		
10/5/64 1315	17,500	66	9.2	98	142	7.6 / 7.8	—[c]		7.5 / 0.33		0 / 0.00	76 / 1.25		3.0 / 0.08			0.1				23	56	0	1	Median 230.	USGS
11/11 1455	22,000	51	10.0	89	114	- / 7.4	—[c]		— / 0.24		0 / 0.00	44 / 0.72		4.9 / 0.14			0.0				21	44	8	280	Maximum 620.	
12/9 1205	5,740	53	10.6	97	179	7.5 / 8.2	—[c]		9.8 / 0.43		0 / 0.00	82 / 1.34		6.4 / 0.18			0.0				24	67	0	4	Minimum 21.	
1/13/65 0925	33,400	48	10.6	91	137	7.3 / 8.2	—[c]		6.2 / 0.27		0 / 0.00	66 / 1.08		2.9 / 0.08			0.0				20	55	1	140		
2/2 0855	31,300	49	10.8	94	135	7.4 / 8.0	—[c]		6.2 / 0.27		0 / 0.00	68 / 1.11		2.7 / 0.08			0.1				20	55	0	100		
3/1 0945	9,630	56	10.0	95	163	7.3 / 8.2	—[c]		7.6 / 0.33		0 / 0.00	80 / 1.31		4.2 / 0.12			0.0				20	68	2	90		
4/5 1100	8,040	56	9.9	94	143	7.5 / 7.6	—[c]		7.2 / 0.31		0 / 0.00	66 / 1.08		8.2 / 0.23			0.0				22	56	2	30		
5/3 1030	9,160	61	9.4	95	150	7.4 / 8.4	15 / 0.75	6.1 / 0.50	6.5 / 0.28	1.2 / 0.03	3 / 0.10	65 / 1.07	11 / 0.23	3.3 / 0.09	1.5 / 0.02		0.0	20	ABS 0.0 As 0.00 PO_4 0.00	104[f]	18	62	4	40	
6/16 1030	7,080	68	9.4	102	140	7.4 / 8.2	—[c]		7.2 / 0.31		0 / 0.00	70 / 1.15		3.8 / 0.11			0.0				22	56	0	30		
7/14 0940	8,410	73	9.1	104	127	7.4 / 8.1	—[c]		6.7 / 0.29		0 / 0.00	64 / 1.05		2.7 / 0.08			0.1				23	49	0	15		
8/11 1150	9,260	66	9.3	99	123	7.3 / 8.2	—[c]		5.7 / 0.25		0 / 0.00	65 / 1.07		2.6 / 0.07			0.1				21	48	0	15		
9/15 1000	8,440	67	9.4	101	125	7.4 / 8.0	14 / 0.70	3.4 / 0.28	7.0 / 0.30	1.6 / 0.04	0 / 0.00	65 / 1.07	5.0 / 0.10	2.4 / 0.07	1.4 / 0.02		0.0	20	ABS 0.0 As 0.00 PO_4 0.06	87[f]	23	49	0	10	

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER ABOVE COLUSA TROUGH (STA. 14b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micramhos at 25°C)	pH a/b	Mineral constituents in ppm / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by
10/5/64 1155	6,610	66	9.2	98	144	7.6 / 8.1	1.14[c]		7.5 / 0.33		0 / 0.00	78 / 1.28		2.8 / 0.08			0.0				22	57	0	1		USGS
11/11 1025	18,800	55	9.2	86	136	- / 7.7	0.94[c]		8.5 / 0.37		0 / 0.00	53 / 0.87		5.3 / 0.15			0.0				28	47	4	100		
12/9 1010	6,990	52	10.7	97	180	7.6 / 8.2	1.36[c]		9.2 / 0.40		0 / 0.00	84 / 1.38		6.2 / 0.17			0.1				23	68	0	8		
1/13/65 0800	25,600	48	10.4	90	158	7.4 / 8.2	1.20[c]		8.4 / 0.37		0 / 0.00	72 / 1.18		4.6 / 0.13			0.0				24	60	1	200		
2/2 0725	22,200	48	10.4	90	150	7.5 / 7.9	1.18[c]		7.7 / 0.33		0 / 0.00	72 / 1.18		4.3 / 0.12			0.1				22	59	0	130		
3/1 0830	11,200	51	9.2	82	166	7.3 / 8.2	1.34[c]		7.3 / 0.32		0 / 0.00	80 / 1.31		3.8 / 0.11			0.1				19	67	1	30		
4/5 1005	11,100	56	10.0	95	141	7.6 / 7.7	1.08[c]		7.5 / 0.33		0 / 0.00	65 / 1.07		4.7 / 0.13			0.0				23	54	1	30		
5/3 0840	8,720	64	9.3	97	187	7.4 / 8.5	16 / 0.80	7.5 / 0.62	11 / 0.48	1.2 / 0.03	5 / 0.17	74 / 1.21	13 / 0.27	6.4 / 0.18	1.7 / 0.03		0.1	18	ABS 0.0 As 0.00 PO_4 0.00	120[f]	25	71	2	40		
6/16 0830	6,480	68	8.4	92	192	7.4 / 8.2	1.40[c]		13 / 0.57		0 / 0.00	85 / 1.39		7.1 / 0.20			0.0				29	70	0	30		
7/14 0805	7,970	67	8.9	96	146	7.4 / 8.2	1.08[c]		9.2 / 0.40		0 / 0.00	70 / 1.15		3.7 / 0.10			0.0				27	54	0	36		
8/11 0940	8,820	68	8.9	97	150	7.4 / 8.2	1.08[c]		9.0 / 0.39		0 / 0.00	72 / 1.18		4.6 / 0.13			0.1				27	54	0	15		
9/15 0815	10,700	64	9.0	94	186	7.4 / 8.2	14 / 0.70	7.8 / 0.64	13 / 0.57	1.2 / 0.03	0 / 0.00	88 / 1.44	11 / 0.23	6.3 / 0.18	1.6 / 0.03		0.0	21	ABS 0.0 As 0.00 PO_4 0.09	122[f]	29	67	0	15		

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER AT DELTA (STA. 11)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25° C)	pH a/b	Mineral constituents in parts per million / equivalents per million												Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by i
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	N.C. ppm		
10/5/64 1145	160	61	10.5	110	164	8.2 / 8.1	1.14[c]		13. / 0.57		0 / 0.00	85 / 1.39		8.8 / 0.25			0.2				33	57	0	1	Median 13.6	USGS
11/10 1210	1330	46	10.3	90	102	7.3 / 7.8	0.82[c]		5.0 / 0.22		0 / 0.00	50 / 0.82		3.3 / 0.09			0.1				21	41	0	15	Maximum 1300	
12/7 1130	543	45	11.3	97	125	7.8 / 8.1	1.00[c]		6.2 / 0.27		0 / 0.00	66 / 1.08		3.0 / 0.08			0.1				21	50	0	1	Minimum 0.62	
1/12/65 1105	2340	44	11.6	98	84	7.4 / 8.0	0.73[c]		3.8 / 0.17		0 / 0.00	46 / 0.75		1.0 / 0.03			0.0				19	36	0	7		
2/2 1145	1480	43	11.9	100	94	7.4 / 8.1	0.80[c]		3.6 / 0.16		0 / 0.00	50 / 0.82		1.4 / 0.04			0.1				17	40	0	5		
3/2 1130	796	44	11.6	98	109	7.7 / 8.0	0.91[c]		4.8 / 0.21		0 / 0.00	58 / 0.95		2.1 / 0.06			0.0				19	46	0	3		
4/6 1015	1010	45	11.1	96	98	7.7 / 7.8	0.85[c]		4.2 / 0.18		0 / 0.00	51 / 0.84		2.1 / 0.06			0.1				17	42	0	4		
5/3 1150	1760	48	11.1	99	82	7.5 / 7.7	6.4 / 0.32	4.9 / 0.40	2.8 / 0.12	0.0 / 0.00	0 / 0.00	44 / 0.72	1.0 / 0.02	1.2 / 0.03	0.8 / 0.01		0.0	17.		54[f]	14	36	0	5		
6/14 1335	541	57	10.2	102	118	7.9 / 8.2	0.98[c]		6.0 / 0.26		0 / 0.00	67 / 1.10		3.6 / 0.10			0.0				21	49	0	2		
7/13 0920	278	64	9.9	107	142	8.0 / 8.2	1.06[c]		7.6 / 0.33		0 / 0.00	73 / 1.20		5.5 / 0.16			0.1				24	53	0	1		
8/10 1050	210	69	9.2	105	152	8.2 / 8.1	1.12[c]		10. / 0.44		0 / 0.00	82 / 1.34		7.3 / 0.21			0.2				28	56	0	1		
9/14 1150	202	61	10.2	107	154	8.1 / 8.2	8.8 / 0.44	7.8 / 0.64	11. / 0.48	1.1 / 0.03	0 / 0.00	79 / 1.29	2.0 / 0.04	7.7 / 0.22	3.7 / 0.06		0.2	31.	ABS 0.0 As 0.00 PO_4 0.05	100[f]	30	54	0	1		

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME / LAB / SAMPLER	G.H. Q	CC	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
B9 1850.00 SACRAMENTO RIVER AT FREEPORT (15b)																			
B91850.0C 10/05/64 5000 1430	2.62	8.7 97	70.0F	8.1 7.5	149	-- 	-- 	9.0 .39	-- 	0.0 .00	75 1.23	-- 	4.8 .14	-- 	-- 	.0 	-- 	-- 	57 0
B91850.0C 11/09/64 5000 1530	3.54	9.4 92	58.0F	7.2 7.3	183	-- 	-- 	11 .48	-- 	0.0 .00	79 1.30	-- 	6.8 .19	-- 	-- 	.0 	-- 	-- 	64 0
B91850.0C 12/09/64 5000 1445	3.17	10.4 92	52.0F	8.2 7.3	174	-- 	-- 	10 .44	-- 	0.0 .00	78 1.28	-- 	6.2 .17	-- 	-- 	.1 	-- 	-- 	62 0
B91850.0C 01/05/65 5000 0845	20.62	11.6 100	48.0F	7.8 7.2	87	-- 	-- 	4.8 .21	-- 	0.0 .00	38 .62	-- 	2.5 .07	-- 	-- 	.0 	-- 	-- 	33 2
B91850.0C 02/04/65 5000 1530	14.84	11.1 94	47.0F	7.9 7.3	121	-- 	-- 	5.4 .23	-- 	0.0 .00	58 .95	-- 	3.6 .10	-- 	-- 	.0 	-- 	-- 	51 4
B91850.0C 03/03/65 5000 1500	6.79	11.0 101	53.0F	8.0 7.3	138	-- 	-- 	7.3 .32	-- 	0.0 .00	62 1.02	-- 	4.8 .14	-- 	-- 	.0 	-- 	-- 	52 1
B91850.0C 04/07/65 5000 1600	5.30	10.5 96	53.0F	7.1 7.3	121	-- 	-- 	6.6 .29	-- 	0.0 .00	55 .90	-- 	4.3 .12	-- 	-- 	.0 	-- 	-- 	45 0
B91850.0C 05/04/65 5000 1500	8.51	10.2 101	59.0F	7.4 7.3	96	9.0 .45 47	3.5 .29 30	4.5 .20 21	0.8 .02 2	0.0 .00 	44 .72 77	5.0 .10 11	2.2 .06 6	3.0 .05 5	-- 	.0 	18 	69 68	37 1
B91850.0C 06/16/65 5000 1345	3.10	8.3 92	69.0F	8.1 7.3	140	-- 	-- 	9.2 .40	-- 	0.0 .00	63 1.03	-- 	5.1 .14	-- 	-- 	.0 	-- 	-- 	52 1
B91850.0C 07/14/65 5000 1440	2.38	8.6 97	71.0F	8.2 7.7	139	-- 	-- 	8.3 .36	-- 	0.0 .00	65 1.07	-- 	5.4 .15	-- 	-- 	.0 	-- 	-- 	51 0
B91850.0C 08/11/65 5000 1430	2.52	8.2 92	70.0F	8.2 7.5	153	-- 	-- 	9.7 .42	-- 	0.0 .00	70 1.15	-- 	6.6 .19	-- 	-- 	.1 	-- 	-- 	54 0
B91850.0C 09/14/65 5000 1415	4.23	8.4 94	70.0F	7.9 7.7	197	15 .75 37	7.9 .65 32	14 .61 30	1.1 .03 1	0.0 .00 	91 1.49 74	13 .27 13	8.3 .23 11	1.9 .03 1	-- 	.0 	19 	126 125	70 0

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER NEAR HAMILTON CITY (STA. 13)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25° C)	pH a/b	Mineral constituents in ppm / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by[i]
10/5/64 1700		65	9.5	100	134	7.5 / 8.1	1.06[c]		7.5 / 0.33		0 / 0.00	74 / 1.21		2.6 / 0.07			0.2				24	53	0	1	Median 341.	USGS
11/11 1700		51	10.3	92	142	- / 7.8	1.04[c]		7.4 / 0.32		0 / 0.00	52 / 0.85		7.2 / 0.20			0.1				24	52	9	190	Maximum 24000.	
12/10 0930		53	10.2	93	174	7.4 / 7.6	—[c]		9.7 / 0.42		0 / 0.00	79 / 1.29		5.8 / 0.16			0.0				25	64	0	3	Minimum 23.	
1/13/65 1300		48	10.7	92	130	7.4 / 8.1	1.04[c]		6.1 / 0.27		0 / 0.00	64 / 1.05		2.4 / 0.07			0.0				21	52	0	200		
2/2 1125		48	10.8	93	124	7.5 / 7.9	1.02[c]		5.8 / 0.25		0 / 0.00	64 / 1.05		2.0 / 0.06			0.0				20	51	0	100		
3/1 1245		52	10.0	91	157	7.3 / 8.0	1.34[c]		7.2 / 0.31		0 / 0.00	75 / 1.23		4.3 / 0.12			0.1				19	67	5	30		
4/5 1400		56	9.9	94	151	7.4 / 7.6	1.22[c]		7.8 / 0.34		0 / 0.00	67 / 1.10		4.3 / 0.12			0.0				22	61	6	15		
5/3 1310		57	9.9	95	145	7.5 / 8.5	14. / 0.70	5.6 / 0.46	6.7 / 0.29	1.2 / 0.03	3 / 0.10	61 / 1.00	11 / 0.23	3.4 / 0.10	1.8 / 0.03		0.0	14	ABS 0.0 As 0.00 PO_4 0.00	95[f]	20	58	3	40		
6/16 1330		63	10.1	104	125	7.4 / 8.3	1.04[c]		6.2 / 0.27		2 / 0.07	60 / 0.98		3.0 / 0.08			0.0				21	52	0	15		
7/14 1400		59	10.1	100	122	7.4 / 8.1	0.94[c]		6.1 / 0.27		0 / 0.00	62 / 1.02		2.4 / 0.07			0.0				22	47	0	10		
8/11 1445		58	9.9	96	117	7.3 / 8.2	0.90[c]		5.4 / 0.23		0 / 0.00	61 / 1.00		2.5 / 0.07			0.1				20	45	0	15		
9/15 1345		59	10.1	100	120	7.3 / 7.7	11 / 0.55	4.7 / 0.39	5.8 / 0.25	1.4 / 0.04	0 / 0.00	62 / 1.02	6.0 / 0.12	2.5 / 0.07	2.2 / 0.04		0.0	21	ABS 0.0 As 0.00 PO_4 0.18	84[f]	20	47	0	5		

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO RIVER AT KESWICK (STA. 12)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25° C)	pH a/b	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by i
10/5/64 0835	5,540	56	8.1	79	121	7.2 / 8.1	1.02[c]		6.5 / 0.28		0 / 0.00	68 / 1.11	0.0 / 0.00	1.7 / 0.05			0.1				22	51	0	1		USGS
11/9 1610	4,330	55	7.0	67	123	6.8 / 8.0	0.96[c]		5.8 / 0.25		0 / 0.00	58 / 0.95	9.0 / 0.19	2.0 / 0.06			0.0				21	48	0	5		
12/7 0830	3,170	52	9.3	86	129	7.0 / 8.1	1.00[c]		6.0 / 0.26		0 / 0.00	66 / 1.08	0.15 / 0.15	0.05 / 0.05			0.00				21	50	0	2		
1/12/65 0900	20,000	49	10.6	94	105	7.2 / 7.8	0.78[c]		6.6 / 0.29		0 / 0.00	50 / 0.82	7.0 / 0.15	1.5 / 0.04			0.0				27	39	0	80		
2/1 1030	20,000	46	11.1	95	107	7.0 / 7.9	0.82[c]		5.3 / 0.23		0 / 0.00	47 / 0.77	11. / 0.23	1.2 / 0.03			0.0				22	41	2	35		
3/1 0915	4,080	45	10.7	90	106	7.0 / 8.1	0.80[c]		4.8 / 0.21		0 / 0.00	48 / 0.79	12. / 0.25	0.9 / 0.03			0.0				21	40	1	20		
4/5 1020	3,570	46	10.0	86	111	7.0 / 7.8	0.88[c]		5.9 / 0.26		0 / 0.00	54 / 0.89	3.0 / 0.06	1.8 / 0.05			0.1				23	44	0	20		
5/4 1815	5,120	51	11.0	100	104	6.8 / 8.2	8.2 / 0.41	5.2 / 0.43	4.7 / 0.20	0.5 / 0.01	0 / 0.00	47 / 0.77	10. / 0.21	1.5 / 0.04	0.2 / 0.00		0.0	17.	ABS 0.0 As 0.00 PO_4 0.05	73[f]	19	42	3	20		
6/14 1215	8,070	49	9.8	87	108	7.2 / 8.1	0.86[c]		5.3 / 0.23		0 / 0.00	55. / 0.90	5.0 / 0.10	2.0 / 0.06			0.0				21	43	0	15		
7/12 1845	10,900	51	10.4	95	107	7.1 / 8.1	0.88[c]		5.0 / 0.22		0 / 0.00	57 / 0.93	5.0 / 0.10	2.0 / 0.06			0.0				20	44	0	3		
8/10 0815	11,200	51	10.1	92	107	7.2 / 8.2	0.84[c]		4.7 / 0.20		0 / 0.00	57 / 0.93	5.0 / 0.10	1.8 / 0.05			0.1				19	42	0	10		
9/14 0900	9,190	51	10.4	95	107	7.2 / 7.9	10. / 0.50	4.1 / 0.34	5.0 / 0.22	1.2 / 0.03	0 / 0.00	58 / 0.95	4.0 / 0.08	1.4 / 0.04	1.3 / 0.02		0.0	18.	ABS 0.0 As 0.00 PO_4 0.09	79[f]	20	42	0	5		

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. Q	CO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
B01210.00 SACRAMENTO RIVER AT RIO VISTA (16)																				
B91210.00		3.41	7.7	69.0F	8.2	166	--	--	11	--	0.0	79	--	7.0	--	--	.1	--	--	62
10/05/64	5000		85		7.3				.48		.00	1.30		.20						0
1130																				
B91210.00		5.75	9.3	59.0F	8.1	193	--	--	13	--	0.0	82	--	11	--	--	.0	--	--	67
11/09/64	5000		92		7.3				.57		.00	1.34		.31						0
1200																				
B91210.00		11.12	9.4	53.0F	8.0	164	--	--	11	--	0.0	70	--	7.3	--	--	.1	--	--	58
12/09/64	5000		86		7.3				.48		.00	1.15		.21						1
1130																				
B91210.00		13.88	11.4	48.0F	7.9	141	--	--	9.2	--	0.0	62	--	4.2	--	--	.1	--	--	51
01/05/65	5000		98		7.3				.40		.00	1.02		.12						0
1315																				
B91210.00		11.54	10.7	47.0F	8.1	189	--	--	10	--	0.0	84	--	7.6	--	--	.2	--	--	71
02/04/65	5000		91		7.3				.44		.00	1.38		.21						2
1330																				
B91210.00		5.30	10.7	54.0F	8.0	173	--	--	9.0	--	0.0	72	--	8.3	--	--	.1	--	--	63
03/03/65	5000		99		7.3				.39		.00	1.18		.23						4
1330																				
B91210.00		4.00	9.9	54.0F	7.7	144	--	--	7.8	--	0.0	62	--	5.3	--	--	.0	--	--	54
04/07/65	5000		92		7.3				.34		.00	1.02		.15						3
1130																				
B91210.00		2.94	9.7	62.0F	7.6	124	12	4.4	5.9	1.1	0.0	56	6.0	4.4	3.1	--	.1	19	85	48
05/04/65	5000		99		7.3		.60	.36	.26	.03	.00	.92	.12	.12	.05				83	2
1300							48	29	21	2		76	10	10	4					
B91210.00		2.58	8.2	67.0F	8.2	162	--	--	11	--	0.0	69	--	7.1	--	--	.1	--	--	55
06/16/65	5000		89		7.5				.48		.00	1.13		.20						0
1030																				
B91210.00		2.35	8.5	71.0F	8.1	162	--	--	10	--	0.0	71	--	7.4	--	--	.0	--	--	60
07/14/65	5000		96		8.1				.44		.00	1.16		.21						2
1130																				
B91210.00		3.41	7.6	71.0F	8.0	166	--	--	11	--	0.0	75	--	7.9	--	--	.1	--	--	57
08/11/65	5000		86		7.7				.48		.00	1.23		.22						0
1230																				
B91210.00		2.65	7.6	70.0F	8.0	199	18	6.3	14	1.4	0.0	91	11	9.5	1.9	--	.0	19	124	71
09/14/65	5000		85		7.5		.90	.52	.61	.04	.00	1.49	.23	.27	.03				126	0
1200							43	25	29	2		74	11	13	1					

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

SACRAMENTO SLOUGH NEAR KNIGHTS LANDING (STA. 14a)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25° C)	pH a/b	Mineral constituents in parts per million / equivalents per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by i
10/5/64 1110		72	9.3	106	632	8.0 / 8.2	4.24[c]		46. / 2.00		0 / 0.00	2.51 / 4.11		65. / 1.83			0.1				32	212	6	15		USGS
11		Inaccessible																								
12/9 0915		52	9.0	81	373	7.9 / 8.2	2.80[c]		25 / 2.80		0 / 0.00	197 / 3.23		18 / 0.51			0.0				28	140	0	40		
1/65		Inaccessible																								
2/		Inaccessible																								
3/		Inaccessible																								
4/5 0915		60	9.2	92	221	7.8 / 7.8	1.80[c]		11 / 0.48		0 / 0.00	114 / 1.87		9.9 / 0.28			0.0				21	90	0	80		
5/		Inaccessible																								
6/16 0755		73	7.0	80	394	7.4 / 8.6	2.96[c]		28 / 1.22		12 / 0.40	166 / 2.72		28 / 0.79			0.1				29	148	0	40		
7/14 0710		76	6.4	76	496	7.6 / 8.0	3.52[c]		38 / 1.65		0 / 0.00	219 / 3.59		43 / 1.21			0.1				32	176	0	36		
8/11 0715		77	7.4	90	494	7.4 / 8.6	3.52[c]		38 / 1.65		10 / 0.33	210 / 3.44		42 / 1.18			0.1				32	176	0	45		
9/15 0715		70	7.1	79	420	7.6 / 8.2	29 / 1.45	22 / 1.79	28 / 1.22	2.1 / 0.05	0 / 0.00	218 / 3.57	9.0 / 0.19	25 / 0.71	5.6 / 0.09		0.1	28		244[f]	27	162	0	30		

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. Q	CC	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
							CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
B9 5020.00 SAN JOAQUIN RIVER AT ANTIOCH (23)																				
B95020.00			7.2	70.0F	8.1	649	--	--	80	--	0.0	98	--	127	--	--	.1	--	--	110
10/05/64	5000		80		7.5				3.48		.00	1.61		3.58						30
1230																				
B95020.00			7.5	62.0F	8.2	1490	--	--	210	--	0.0	90	--	362	--	--	.3	--	--	178
11/09/64	5000		77		7.3				9.14		.00	1.48		10.21						104
1300																				
B95020.00			8.6	56.0F	7.8	398	--	--	41	--	0.0	89	--	60	--	--	.2	--	--	92
12/09/64	5000		82		7.3				1.78		.00	1.46		1.69						19
1245																				
B95020.00			10.3	49.0F	7.1	202	--	--	15	--	0.0	49	--	19	--	--	.1	--	--	58
01/05/65	5000		90		7.1				.65		.00	.80		.54						18
1100																				
B95020.00			9.7	49.0F	7.9	269	--	--	23	--	0.0	64	--	30	--	--	.1	--	--	76
02/04/65	5000		84		7.1				1.00		.00	1.05		.85						24
1245																				
B95020.00			9.5	57.0F	8.0	247	--	--	22	--	0.0	65	--	28	--	--	.1	--	--	68
03/04/65	5000		102		7.3				.96		.00	1.07		.79						15
1445																				
B95020.00			9.4	58.0F	7.6	231	--	--	21	--	0.0	64	--	28	--	--	.0	--	--	61
04/07/65	5000		92		7.3				.91		.00	1.05		.79						9
1315																				
B95020.00			9.1	64.0F	7.5	174	12	4.9	13	1.2	0.0	51	14	17	2.8	--	.0	21	108	50
05/04/65	5000		95		7.3		.60	.40	.57	.03	.00	.84	.29	.48	.05				111	8
1200							38	25	36	2		51	17	29	3					
B95020.00			8.4	70.0F	8.1	197	--	--	18	--	0.0	58	--	20	--	--	.1	--	--	54
06/16/65	5000		94		7.5				.78		.00	.95		.56						7
1200																				
B95020.00			8.2	72.0F	8.0	545	--	--	71	--	0.0	68	--	111	--	--	.0	--	--	90
07/14/65	5000		93		7.9				3.09		.00	1.12		3.13						34
1050																				
B95020.00			7.2	73.0F	7.3	1080	--	--	152	--	0.0	74	--	267	--	--	.2	--	--	146
08/11/65	5000		83		7.5				6.61		.00	1.21		7.53						86
1045																				
B95020.00			7.8	71.0F	7.4	475	23	8.4	54	3.5	0.0	84	23	88	0.6	--	.0	12	259	92
09/14/65	5000		88		7.7		1.15	.69	2.35	.09	.00	1.38	.48	2.48	.01				254	23
1045							27	16	55	2		32	11	57						

TABLE D-2

MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / CATE / TIME	LAB / SAMPLER	G.H. Q	CO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
							CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
B95710.00						B95710.00	SAN JOAQUIN RIVER AT GARWOOD BRIDGE (101)													
B95710.00		6.79	8.4	70.0F	8.2	761	--	--	82	--	0.0	168	--	117	--	--	.2	--	--	170
10/08/64	5000		94		7.7				3.57		.00	2.76		3.30						32
0815																				
B95710.00		5.62	8.7	58.0F	8.1	692	--	--	78	--	0.0	134	--	106	--	--	.5	--	--	150
11/11/64	5000		85		7.5				3.39		.00	2.20		2.99						40
1015																				
B95710.00		7.63	8.5	54.0F	8.4	658	--	--	70	--	2.0	110	--	104	--	--	.4	--	--	139
12/10/64	5000		79		7.3				3.05		.07	1.80		2.93						46
1015																				
B95710.00		16.47	9.8	50.0F	8.0	218	--	--	20	--	0.0	58	--	22	--	--	.1	--	--	54
01/07/65	5000		87		7.1				.87		.00	.95		.62						7
0930																				
B95710.00		13.55	10.3	48.0F	7.4	257	--	--	26	--	0.0	55	--	32	--	--	.1	--	--	62
02/03/65	5000		89		7.1				1.13		.00	.90		.90						17
1030																				
B95710.00		5.76	10.5	53.0F	8.1	310	--	--	30	--	0.0	58	--	43	--	--	.1	--	--	73
03/04/65	5000		96		7.3				1.31		.00	.95		1.21						26
0915																				
B95710.00		7.25	10.1	55.0F	7.8	308	--	--	34	--	0.0	64	--	41	--	--	.1	--	--	72
04/08/65	5000		95		7.5				1.48		.00	1.05		1.16						20
1045																				
B95710.00		6.65	9.8	53.0F	7.1	239	17	4.7	23	1.6	0.0	60	19	31	1.1	--	.1	16	149	62
05/06/65	5000		90		7.5		.85	.39	1.00	.04	.00	.98	.40	.87	.02				143	13
0815							37	17	44	2		43	18	38	1					
B95710.00		7.09	8.4	65.0F	8.2	136	--	--	12	--	0.0	36	--	17	--	--	.0	--	--	36
06/17/65	5000		89		7.1				.52		.00	.59		.48						7
0900																				
B95710.00		6.15	7.2	76.0F	8.2	576	--	--	65	--	0.0	112	--	102	--	--	.1	--	--	129
07/15/65	5000		86		7.7				2.83		.00	1.84		2.88						37
0740																				
B95710.00		4.66	3.0	78.0F	8.4	672	--	--	78	--	2.0	144	--	114	--	--	.2	--	--	138
08/12/65	5000		36		7.5				3.39		.07	2.36		3.21						17
0930																				
B95710.00		5.21	7.1	72.0F	7.9	640	34	14	71	6.1	0.0	148	37	98	10	--	.1	26	378	142
09/16/65	5000		81		8.1		1.70	1.15	3.09	.16	.00	2.43	.77	2.76	.16				369	21
0845							28	19	51	3		40	13	45	3					

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. Q	CO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
B95820.00 SAN JOAQUIN RIVER AT MOSSDALE (102)																				
B95820.00		2.77	7.6	69.0F	8.2	764	--	--	80	--	0.0	162	--	117	--	--	.2	--	--	180
10/08/64	5000		84		7.7				3.48		.00	2.66		3.30						47
0915																				
B95820.00		1.55	8.2	57.0F	7.8	725	--	--	80	--	0.0	132	--	113	--	--	.2	--	--	156
11/11/64	5000		79		7.3				3.48		.00	2.16		3.19						48
1115																				
B95820.00		1.87	8.7	56.0F	8.4	643	--	--	69	--	4.0	98	--	100	--	--	.3	--	--	136
12/10/64	5000		83		7.3				3.00		.13	1.61		2.82						49
1115																				
B95820.00		20.30	9.7	50.0F	8.0	209	--	--	18	--	0.0	58	--	21	--	--	.1	--	--	56
01/07/65	5000		86		7.2				.78		.00	.95		.59						9
1015																				
B95820.00		17.10	10.3	48.0F	7.4	262	--	--	26	--	0.0	55	--	32	--	--	.2	--	--	62
02/03/65	5000		89		7.1				1.13		.00	.90		.90						17
1115																				
B95820.00		5.10	10.5	54.0F	7.9	306	--	--	30	--	0.0	58	--	43	--	--	.1	--	--	71
03/04/65	5000		98		7.3				1.31		.00	.95		1.21						24
1015																				
B95820.00		5.83	10.2	55.0F	7.9	326	--	--	34	--	0.0	67	--	43	--	--	.1	--	--	76
04/08/65	5000		96		7.5				1.48		.00	1.10		1.21						21
1130																				
B95820.00		5.15	9.7	58.0F	8.1	255	17	5.2	25	1.6	0.0	60	21	34	1.7	--	.1	17	153	64
05/06/65	5000		95		7.3		.85	.43	1.09	.04	.00	.98	.44	.96	.03				152	15
0915							35	18	45	2		41	18	40	1					
B95820.00		6.75	8.5	65.0F	7.8	153	--	--	13	--	0.0	40	--	20	--	--	.0	--	--	39
06/17/65	5000		90		7.1				.57		.00	.66		.56						6
0945																				
B95820.00		3.65	8.3	7.6F	8.3	576	--	--	60	--	2.0	103	--	99	--	--	.1	--	--	134
07/15/65	5000		99		7.7				2.61		.07	1.69		2.79						46
0830																				
B95820.00		2.57	9.1	77.0F	8.4	880	--	--	93	--	4.0	152	--	162	--	--	.3	--	--	202
08/12/65	5000		109		8.1				4.05		.13	2.49		4.57						71
1030																				
B95820.00		1.80	10.0	73.0F	7.9	739	45	14	79	3.8	0.0	146	48	123	5.0	--	.1	25	444	172
09/16/65	5000				8.1		2.25	1.15	3.44	.10	.00	2.39	1.00	3.47	.08				414	53
0930							32	17	50	1		34	14	50	1					

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. Q	CU	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
						B95620.00	STOCKTON SHIP CHANNEL ON RINDGE TRACT (100)														
BS5620.00		2.71	5.6	71.0F	8.2	741	--	--	81	--	0.0	158	--	119	--	--	.1	--	--	174
10/15/64	5000		63		7.5				3.52		.00	2.59		3.36						45
1506																				
BS5620.00		1.47	7.8	57.0F	7.5	635	--	--	68	--	0.0	126	--	102	--	--	.1	--	--	145
11/11/64	5000		75		7.3				2.96		.00	2.07		2.88						42
0915																				
BS5620.00		1.79	7.4	54.0F	8.3	609	--	--	61	--	3.0	99	--	88	--	--	.5	--	--	131
12/10/64	5000		69		7.3				2.65		.10	1.62		2.48						45
C930																				
BS5620.00		13.37	9.8	52.0F	7.4	272	--	--	21	--	0.0	48	--	28	--	--	.2	--	--	78
01/06/65	5000		89		7.1				.91		.00	.79		.79						39
1130																				
BS5620.00		12.24	9.4	47.0F	8.0	301	--	--	30	--	0.0	64	--	37	--	--	.2	--	--	72
02/03/65	5000		80		7.1				1.31		.00	1.05		1.04						20
0915																				
BS5620.00		0.78	10.0	53.0F	7.7	278	--	--	28	--	0.0	53	--	38	--	--	.1	--	--	65
03/01/65	5000		92		7.3				1.22		.00	.87		1.07						22
0940																				
BS5620.00		3.83	9.6	56.0F	7.3	377	--	--	40	--	0.0	76	--	53	--	--	.0	--	--	90
04/08/65	5000		92		7.5				1.74		.00	1.25		1.49						28
0930																				
BS5620.00		0.50	10.0	63.0F	7.2	268	19	5.0	26	1.8	0.0	64	24	35	1.7	--	.1	15	160	68
05/05/65	5000		103		7.5		.95	.41	1.13	.05	.00	1.05	.50	.99	.03				159	16
1315							37	16	44	2		41	19	39	1					
BS5620.00		3.35	7.8	67.0F	8.0	164	--	--	15	--	0.0	44	--	22	--	--	.0	--	--	42
06/17/65	5000		84		7.1				.65		.00	.72		.62						6
0800																				
BS5620.00		0.41	7.6	78.0F	7.9	370	--	--	38	--	0.0	76	--	57	--	--	.0	--	--	87
07/13/65	5000		92		7.5				1.65		.00	1.25		1.61						25
1235																				
BS5620.00		1.66	6.4	76.0F	8.1	288	--	--	26	--	0.0	81	--	37	--	--	.1	--	--	78
08/12/65	5000		76		7.3				1.13		.00	1.33		1.04						12
C830																				
BS5620.00		1.90	5.5	75.0F	7.6	555	28	13	61	4.1	0.0	129	31	90	0.1	--	.2	4.7	342	124
09/15/65	5000		65		7.5		1.40	1.07	2.65	.10	.00	2.12	.64	2.54	.00				295	18
1030							27	20	51	2		40	12	48						

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

STONY CREEK BELOW BLACK BUTTE DAM (STA. 13c)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million / equivalents per million												Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by i
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)				Total ppm	N.C. ppm			
10/6/64 1015	56	70	10.3	116	384	8.1 / 8.5	3.22[c]		20. / 0.87		6 / 0.20	180 / 2.95		23. / 0.65			0.3				21	161	4	15	Median 27. Maximum 23. Minimum 2.3	USGS
11/12	No Flow																									
12/10	No Flow																									
1/14/65 1125	1660	47	12.4	106	222	7.9 / 8.4	1.86[c]		9.0 / 0.39		2 / 0.07	100 / 1.64		9.2 / 0.26	1.1 / 0.02		0.1		PO_4 0.10		17	93	8	400		
2/3	No Flow																									
3/1	No Flow																									
4/6 1230	3.8	52	10.7	98	287	8.1 / 8.0	2.44[c]		12 / 0.52		0 / 0.00	134 / 2.20		14 / 0.39			0.1				18	122	12	17		
5/4 1220	541	59	11.6	115	264	8.0 / 8.0	29 / 1.45	8.6 / 0.71	12 / 0.52	1.1 / 0.03	0 / 0.00	124 / 2.03	16 / 0.33	12 / 0.34	1.9 / 0.03		0.1	11	ABS 0.0 As 0.00 PO_4 0.05	151[f]	19	108	6	85		
6/17 0845	168	62	9.6	99	286	7.7 / 8.5	2.42[c]		11 / 0.48		7 / 0.23	123 / 2.02		12 / 0.34	1.3 / 0.02		0.1		PO_4 0.05		17	121	9	10		
7/15 0745	635	66	9.3	100	293	7.5 / 8.4	2.52[c]		11 / 0.48		3 / 0.10	135 / 2.21		12 / 0.34	2.7 / 0.04		0.1		PO_4 0.20		16	126	10	4		
8/12 1120	746	78	8.7	106	301	7.3 / 8.5	2.64[c]		11 / 0.48		5 / 0.17	146 / 2.39		13 / 0.37	1.5 / 0.02		0.2		PO_4 0.05		15	132	4	35		
9/16 0930	97	68	9.5	105	331	8.1 / 8.3	36 / 1.80	14 / 1.12	14 / 0.61	1.5 / 0.04	2 / 0.07	170 / 2.79	14 / 0.29	14 / 0.39	2.8 / 0.05		0.2	9.2	ABS 0.0 As 0.00 PO_4 0.04	186[f]	17	146	3	30		

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

STONY CREEK NEAR FRUTO (STA. 13f)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million / equivalents per million													Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by i
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	N.C. ppm			
10/1/64 0835	1	61	7.6	79	421	-/8.5	3.48[c]		21./0.91		7/0.23	190/3.11		24./0.68			0.3				21	174	7	1		USGS
11/2 0945	10	56	9.6	93	689	-/8.3	4.88[c]		40./1.74		4/0.13	152/2.49		40./2.71			0.3				26	244	113	2		
12/1 0900	846	49	9.8	87	140	-/7.4	1.16[c]		5.1/0.22		0/0.00	58/0.95		4.4/0.12			0.0				16	58	10	200		
1/4/65 1000	4612	42	12.4	100	262	-/8.3	2.12[c]		10/0.44		1/0.03	99/1.62		11/0.31			0.0				17	106	23	700		
2/1 0915	2256	42	11.9	96	208	-/8.1	1.86[c]		6.1/0.27		0/0.00	94/1.54		4.3/0.12			0.1				12	93	16	1200		
3/1 0930	566	43	13.0	106	260	-/8.1	2.30[c]		8.4/0.37		0/0.00	111/1.82		7.4/0.21			0.0				14	115	24	300		
4/1 0945	545	50	12.3	111	273	-/7.8	2.38[c]		9.8/0.43		0/0.00	116/1.90		10/0.28			0.0				15	119	24	250		
5/3 0830	1700	54	12.7	120	242	-/7.9	32/1.60	6.8/0.56	7.7/0.33	0.5/0.01	0/0.00	110/1.80	26/0.54	5.4/0.15	0.2/0.00		0.1	12	ABS 0.0 As 0.00 PO_4 0.10	148[f]	13	108	18	400		
6/1 0900	410	60	11.1	113	279	-/8.5	2.50[c]		10/0.44		8/0.27	116/1.90		10/0.28	0.0/0.00		0.1		PO_4 0.05		15	125	17	60		
7/1 0800	340	62	9.7	101	329	-/8.4	2.88[c]		13/0.57		1/0.03	151/2.47		11/0.31	2.4/0.04		0.1		PO_4 0.15		17	144	19	5		
8/2 0800	400	70	9.9	112	289	-/8.6	2.52[c]		11/0.48		5/0.17	145/2.38		12/0.34	1.1/0.02		0.3		PO_4 0.05		16	126	0	30		
9/1 0800	348	70	9.7	100	321	-/8.5	32/1.60	15/1.22	14/0.61	1.4/0.04	4/0.13	164/2.69	8.0/0.17	14/0.39	3.4/0.05		0.3	14	ABS 0.0 As 0.00 PO_4 0.08	183[f]	18	141	0	60		

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

THOMES CREEK NEAR MOUTH (STA. 95b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen		Specific conductance (micramhos at 25° C)	pH a/ b	Mineral constituents in parts per million / equivalents per million													Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$		Turbidity in ppm	Californ[h] MPN/ml	Analyzed by i
			ppm	%Sat			Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents			Total ppm	N.C. ppm			
10/7/64	No Flow																									USGS
11/13 1055	—	47	8.8	76	257	7.8 / 8.2	2.22[c]		7.8 / 0.34		0 / 0.00	111 / 1.82		7.2 / 0.20			0.1				13	111	20	100		
12/9 1725	50	52	10.3	94	454	8.0 / 8.3	3.20[c]		19 / 0.83		3 / 0.10	193 / 3.16		28 / 0.79			0.0				18	185	22	8		
1/14/65 0930	150	42	11.0	88	230	8.0 / 8.1	2.12[c]		5.5 / 0.24		0 / 0.00	110 / 1.80		1.7 / 0.05			0.0				10	106	16	1000		
2/5 0855	125	46	9.8	83	196	7.8 / 8.2	1.82[c]		4.3 / 0.19		0 / 0.00	94 / 1.54		4.9 / 0.14			0.3				9	91	14	800		
3/5 0850	100	55	9.6	91	215	7.6 / 8.2	2.00[c]		4.4 / 0.19		0 / 0.00	108 / 1.77		2.0 / 0.06			0.0				9	100	11	100		
4/9 0850	400	48	9.7	84	166	7.8 / 7.5	1.60[c]		4.0 / 0.17		0 / 0.00	82 / 1.34		1.3 / 0.04			0.0				10	80	13	600		
5/6 1115	200	50	9.9	88	234	8.0 / 8.4	32 / 1.60	7.8 / 0.64	4.5 / 0.20	0.9 / 0.02	3 / 0.10	110 / 1.80	22 / 0.46	2.0 / 0.06	1.4 / 0.02		0.0	13	ABS 0.1 As 0.00 PO_4 0.10	140[f]	8	112	17	120		
6/2 0945	66	70	7.8	88	265	8.1 / 8.5	2.60[c]		5.2 / 0.23		4 / 0.13	127 / 2.08		2.6 / 0.07			0.0				8	130	19	70		
7/12 1245	2	75	7.8	92	290	7.4 / 8.4	2.76[c]		6.8 / 0.30		1 / 0.03	137 / 2.25		5.4 / 0.15			0.0				10	138	24	1		
8/9 1240	Trace	77	8.8	106	367	7.0 / 8.4	3.64[c]		7.8 / 0.34		5 / 0.17	187 / 3.06		6.8 / 0.19			0.1				9	182	20	1		
9/	No Sample																									

TABLE D-2

ANALYSES OF SURFACE WATER

CENTRAL VALLEY REGION (NO. 5)

THOMES CREEK NEAR PASKENTA (STA. 13d)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$: Total ppm	Hardness as $CaCO_3$: N.C. ppm	Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by i
10/6/64 1115	0.8	73	9.0	106	457	7.9 / 8.3	— / 3.34[c]		24. / 1.04		2 / 0.07	105 / 1.72		23. / 0.65			0.6				24	167	78	1		USGS
11/12 1410	355	49	11.0	99	212	- / 8.0	— / 1.80[c]		7.4 / 0.32		0 / 0.00	92 / 1.51		7.2 / 0.20			0.1				15	90	15	200			
12/10 1135	280	47	11.5	101	142	7.5 / 8.1	— / 1.26[c]		4.5 / 0.20		0 / 0.00	70 / 1.15		2.1 / 0.06			0.2				14	63	6	20			
1/14/65 1315	900	47	11.3	99	214	8.2 / 8.0	— / 2.00[c]		5.2 / 0.23		0 / 0.00	102 / 1.67		1.3 / 0.04			0.0		PO_4 0.10		10	100	16	1500			
2/3 1135	920	42	11.6	95	185	7.9 / 8.1	— / 1.72[c]		3.8 / 0.17		0 / 0.00	87 / 1.43		0.8 / 0.02	0.8 / 0.01		0.1		PO_4 0.10		9	86	15	600			
3/2 1020	490	46	10.8	93	184	7.1 / 8.0	— / 1.72[c]		3.8 / 0.17		0 / 0.00	88 / 1.44		1.8 / 0.05	0.8 / 0.01		0.0		PO_4 0.05		9	86	14	200			
4/6 1335	330	51	10.9	100	200	8.0 / 8.1	— / 1.90[c]		4.5 / 0.20		0 / 0.00	98 / 1.61		2.2 / 0.06			0.0				10	95	15	80			
5/4 1325	420	60	9.7	100	192	8.0 / 8.0	27 / 1.35	5.5 / 0.45	4.1 / 0.18	0.4 / 0.01	0 / 0.00	96 / 1.57	16 / 0.33	1.7 / 0.05	0.7 / 0.01		0.0	10	ABS 0.0 As 0.00 PO_4 0.10	117[f]	9	90	11	220			
6/17 1015	84	66	8.9	98	294	8.1 / 8.5	— / 2.88[c]		5.8 / 0.25		7 / 0.23	128 / 210		4.5 / 0.13	0.0 / 0.00		0.0		PO_4 0.05		8	144	28	10			
7/15 0845	32	73	8.3	98	398	8.1 / 8.5	— / 3.88[c]		9.2 / 0.40		3 / 0.10	171 / 2.80		7.8 / 0.22	2.2 / 0.04		0.0		PO_4 0.15		9	194	49	1			
8/12 1215	31	83	8.3	108	444	8.1 / 8.4	— / 4.20[c]		10 / 0.44		6 / 0.20	156 / 2.56		14 / 0.39	1.2 / 0.02		0.2				9	210	72	2			
9/16 1030	7	67	9.8	109	511	8.1 / 8.4	54 / 2.69	26 / 2.15	14 / 0.61	1.9 / 0.05	3 / 0.10	174 / 2.85	95 / 1.98	18 / 0.51	3.4 / 0.05		0.1	11	ABS 0.0 As 0.00 PO_4 0.02	326[f]	11	242	94	1			

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME / LAB / SAMPLER	G.H. Q	DO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
						A06120.00 YUBA RIVER AT MARYSVILLE (21)													
A06120.00 11/13/64 5000 1000	60.58 51	10.6 98	54.0F	7.8 7.3	132	-- 	-- 	4.1 .18	-- 	0.0 .00	64 1.05	-- 	1.8 .05	--	--	.0	--	--	57 5
A06120.00 01/08/65 5000 1000	68.71 18500	12.5 103	45.0F	7.6 7.1	50	-- 	-- 	2.3 .10	-- 	0.0 .00	24 .39	-- 	0.4 .01	--	--	.0	--	--	20 1
A06120.00 03/15/65 5000 1415	62.11 860	12.3 111	52.0F	7.8 7.3	77	-- 	-- 	2.2 .10	-- 	0.0 .00	38 .62	-- 	0.7 .02	--	--	.0	--	--	34 3
A06120.00 05/07/65 5000 1245	63.00 1890	11.3 112	59.0F	7.1 7.3	57	8.0 .40 70	1.0 .08 14	1.9 .08 14	0.2 .01 2	0.0 .00	27 .44 80	5.0 .10 18	0.5 .01 2	0.2 .00	--	.0	12	43 42	24 2
A06120.00 07/16/65 5000 0915	61.98 650	8.2 93	72.0F	8.1 7.3	90	-- 	-- 	2.9 .13	-- 	0.0 .00	42 .69	-- 	0.8 .02	--	--	.0	--	--	39 5
A06120.00 09/17/65 5000 0930	60.34	9.3 96	63.0F	7.9 7.5	119	16 .80 65	3.4 .28 23	3.3 .14 11	0.6 .02 2	0.0 .00	62 1.02 82	9.0 .19 15	1.1 .03 2	0.1 .00	--	.0	15	78 79	54 3

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. O	CC	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
							CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
A61100.00 YUBA RIVER NEAR SMARTVILLE (21a)																				
A61100.00 11/19/64 0930	5000	1.70 640	11.0 97	49.0F	7.9 7.3	118	-- 	-- 	3.4 .15	-- 	0.0 .00	56 .92	-- 	0.8 .02	-- 	-- 	.0 	-- 	-- 	49 3
A61100.00 01/08/65 1400	5000	14900	12.7 110	48.0F	7.3 7.1	47	-- 	-- 	2.3 .10	-- 	0.0 .00	23 .38	-- 	0.2 .01	-- 	-- 	.1 	-- 	-- 	19 0
A61100.00 03/05/65 1300	5000	2.68 2610	12.2 110	51.0F	7.8 7.3	72	-- 	-- 	2.3 .10	-- 	0.0 .00	37 .61	-- 	0.6 .02	-- 	-- 	.0 	-- 	-- 	32 2
A61100.00 05/07/65 1400	5000	2.76 4950	11.9 114	56.0F	7.4 7.5	51	8.0 .40 73	0.7 .06 11	1.8 .08 15	0.5 .01 2	0.0 .00 	26 .43 84	3.0 .06 12	0.6 .02 4	0.1 .00 	-- 	.0 	12 	39 39	23 2
A61100.00 07/16/65 1030	5000	760	9.1 99	67.0F	8.0 7.5	71	-- 	-- 	2.3 .10	-- 	0.0 .00	36 .59	-- 	0.8 .02	-- 	-- 	.0 	-- 	-- 	29 0
A61100.00 09/08/65 1315	5000			75.0F	7.9	109	14 .70 65	3.2 .26 24	2.6 .11 10	0.5 .01 1	0.0 .00 	60 .98 88	5.0 .10 9	0.9 .03 3	0.3 .00 	-- 	.0 	13 	71 69	48 0

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME / LAB / SAMPLER	G.H. Q	CC	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
G8 3420.00 CARSON RIVER, EAST FORK, NEAR MARKLEEVILLE (115)																			
G83420.00		10.5	43.0F	8.2	137	--	--	9.6	--	0.0	69	--	2.5	--	--	.2	--	--	46
11/05/64 5000		103		7.7				.42		.00	1.13		.07						0
1015																			
G83420.00		11.4	35.0F	8.2	134	--	--	8.0	--	0.0	64	--	2.0	--	--	.1	--	--	48
01/19/65 5000		99		7.5				.35		.00	1.05		.06						0
0915																			
G83420.00		12.1	35.0F	8.1	135	--	--	8.5	--	0.0	68	--	2.2	--	--	.1	--	--	48
03/09/65 5000		105		7.7				.37		.00	1.12		.06						0
0915																			
G83420.00		10.4	47.0F	7.3	86	9.4	2.1	4.8	0.7	0.0	44	4.0	1.0	1.0	--	.0	19	57	32
05/11/65 5000		108		7.5		.47	.17	.21	.02	.00	.72	.08	.03	.02				64	0
1130						54	20	24	2		85	9	4	2					
G83420.00		9.3	52.0F	7.9	57	--	--	3.3	--	0.0	30	--	0.8	--	--	.0	--	--	22
07/20/65 5000		103		7.5				.14		.00	.49		.02						0
0900																			
G83420.00		10.5	45.0F	7.5	102	12	2.2	5.9	1.2	0.0	52	7.0	1.6	0.9	--	.0	21	70	39
09/21/65 5000		106		7.9		.60	.18	.26	.03	.00	.85	.15	.05	.01				77	0
0900						56	17	24	3		80	14	5	1					

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / CATE / TIME	LAB / SAMPLER	G.H. Q	CC	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
						G8	2300.00 CARSON RIVER, WEST FORK, AT WOODFORDS (115a)														
G82300.00		1.15	10.4	41.0F	7.9	80	--	--	4.3	--	0.0	42	--	0.3	--	--	.0	--	--	29
11/05/64	5000		100		7.3				.19		.00	.69		.01						0
0930																				
G82300.00		2.10	11.4	35.0F	7.9	65	--	--	3.1	--	0.0	34	--	0.3	--	--	.3	--	--	25
01/19/65	5000		100		7.2				.13		.00	.56		.01						0
0945																				
G82300.00		1.60	11.6	35.0F	7.7	68	--	--	3.4	--	0.0	36	--	0.4	--	--	.0	--	--	26
03/09/65	5000		101		7.3				.15		.00	.59		.01						0
0900																				
G82300.00		3.23	10.3	45.0F	7.0	47	5.6	0.7	2.7	1.1	0.0	26	0.0	0.3	1.1	--	.0	16	40	17
05/11/65	5000		103		7.3		.28	.06	.12	.03	.00	.43	.00	.01	.02				40	0
1215							57	12	24	6		93		2	4					
G82300.00		2.48	8.8	54.0F	7.8	49	--	--	2.3	--	0.0	26	--	0.3	--	--	.0	--	--	20
07/20/65	5000		101		7.5				.10		.00	.43		.01						0
0815																				
G82300.00		2.37	10.2	45.0F	7.5	68	9.6	0.5	3.2	1.5	0.0	36	1.0	0.2	0.8	--	.0	18	50	26
09/21/65	5000		104		7.5		.48	.04	.14	.04	.00	.59	.02	.01	.01				52	0
0815							69	6	20	6		94	3	2	2					

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. Q	DO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
							G7 1710.00 LAKE TAHOE AT TAHOE (38)														
G71710.00		4.90	9.0	55.0F	8.0	93	--	--	6.4	--	0.0	50	--	1.7	--	--	.2	--	--	33
11/04/64	5000		106		8.3				.28		.00	.82		.05						0
1245																				
G71710.00		6.94	10.1	42.0F	8.0	93	--	--	6.4	--	0.0	50	--	1.5	--	--	.0	--	--	32
01/18/65	5000	6220	100		7.4				.28		.00	.82		.04						0
1130																				
G71710.00		7.02	10.3	46.0F	8.2	93	--	--	6.2	--	0.0	50	--	1.4	--	--	.0	--	--	32
03/08/65	5000		108		7.7				.27		.00	.82		.04						0
1230																				
G71710.00		7.64	10.1	49.0F	8.1	93	8.8	2.4	6.0	1.6	0.0	49	1.0	1.8	1.8	--	.0	12	51	32
05/10/65	5000		110		7.5		.44	.20	.26	.04	.00	.80	.02	.05	.03				59	0
1230							47	21	28	4		89	2	6	3					
G71710.00		8.71	8.2	64.0F	8.1	94	--	--	5.9	--	0.0	52	--	1.7	--	--	.0	--	--	34
07/19/65	5000		108		8.1				.26		.00	.85		.05						0
1020																				
G71710.00		8.48	8.5	60.0F	8.0	92	12	0.6	5.7	1.6	0.0	49	3.0	1.5	0.0	--	.0	12	51	32
09/20/65	5000		107		8.0		.60	.05	.25	.04	.00	.80	.06	.04	.00				60	0
1145							64	5	27	4		89	7	4						

TABLE D-2

ANALYSES OF SURFACE WATER

LAHONTAN REGION (NO. 6)

SUSAN RIVER AT SUSANVILLE (STA. 17b)

Date and time sampled P.S.T.	Discharge in cfs	Temp in °F	Dissolved oxygen ppm	Dissolved oxygen %Sat	Specific conductance (micromhos at 25°C)	pH a/b	Mineral constituents in parts per million: Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Boron (B)	Silica (SiO_2)	Other constituents	Total dissolved solids in ppm	Percent sodium	Hardness as $CaCO_3$ Total ppm	Hardness as $CaCO_3$ N.C. ppm	Turbidity in ppm	Coliform[h] MPN/ml	Analyzed by i
							equivalents per million																			
10/7/64 1115		56	8.8	98	193	7.6 / 7.9	1.80[c]		7.0 / 0.30		0 / 0.00	124 / 2.03		0.5 / 0.01			0.0				14	90	0	1		USGS
11/12 1340	28	40	10.7	96	158	7.5 / 8.0	1.40[c]		5.9 / 0.26		0 / 0.00	97 / 1.59		0.8 / 0.02			0.0				16	70	0	2		
12/9 1315	20	42	9.2	85	157	7.7 / 8.3	1.32[c]		5.8 / 0.25		1 / 0.03	92 / 1.51		0.7 / 0.02			0.0				16	66	0	1		
1/21/65 0815	121	38	10.1	88	97	7.4 / 8.1	0.82[c]		4.0 / 0.17		0 / 0.00	54 / 0.89		0.8 / 0.02			0.0				17	41	0	3		
2/4 1315	189	38	11.2	98	96	7.3 / 7.6	0.81[c]		4.3 / 0.19		0 / 0.00	53 / 0.87		0.8 / 0.02			0.0				19	40	0	7		
3/4 1300	117	38	10.4	90	107	7.4 / 8.2	0.91[c]		4.0 / 0.17		0 / 0.00	62 / 1.02		0.4 / 0.01			0.0				16	46	0	4		
4/8 1315	193	40	10.5	94	96	7.4 / 7.8	0.83[c]		4.0 / 0.17		0 / 0.00	55 / 0.90		0.5 / 0.01			0.0				17	42	0	6		
5/5 1600	223	49	9.3	94	86	7.4 / 7.8	10 / 0.50	2.9 / 0.24	3.6 / 0.16	0.5 / 0.01	0 / 0.00	48 / 0.79	3.0 / 0.06	0.6 / 0.02	0.5 / 0.01		0.0	24	ABS 0.0 As 0.00 PO_4 0.05	70[f]	18	37	0	5		
6/17 1345	106	53	9.2	98	82	7.6 / 8.1	0.70[c]		3.4 / 0.15		0 / 0.00	48 / 0.79		0.4 / 0.01			0.1				18	35	0	3		
7/15 1415	34	73	7.7	102	89	7.8 / 8.2	0.76[c]		3.7 / 0.16		0 / 0.00	52 / 0.85		0.2 / 0.01			0.0				17	38	0	3		
8/12 1515	133	68	8.3	105	71	7.9 / 8.0	0.63[c]		2.4 / 0.10		0 / 0.00	40 / 0.66		0.3 / 0.01			0.0				14	32	0	10		
9/16 1415	7.4	62	9.5	113	172	8.1 / 8.3	18 / 0.90	7.8 / 0.64	6.0 / 0.26	1.7 / 0.04	1 / 0.03	107 / 1.75	1.0 / 0.02	0.4 / 0.01	3.9 / 0.06		0.0	34	ABS 0.0 As 0.00 PO_4 0.04	113[f]	14	77	0	2		

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. Q	DO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
							CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
							G7 1195.00 TRUCKEE RIVER NEAR FARAD (53)													
G71195.00		2.20	9.9	50.0F	8.0	103	11	2.3	6.3	1.6	0.0	55	3.0	1.2	0.4	--	.1	--	70	37
11/04/64	5050		106		7.6		.55	.19	.27	.04	.00	.90	.06	.03	.01				53	0
1345							52	18	26	4		90	6	3	1					
G71195.00		3.85	11.5	38.0F	7.8	75	9.0	1.3	3.8	1.1	0.0	36	2.0	2.0	1.2	--	.0	--	66	28
01/18/65	5050	3.85	104		7.2		.45	.11	.17	.03	.00	.59	.04	.06	.02				38	0
1345							59	14	22	4		83	6	8	3					
G71195.00		3.72	11.3	37.0F	7.9	93	--	--	4.8	--	0.0	46	--	5.5	--	--	.2	--	--	35
02/01/65	5050		100		7.3				.21		.00	.75		.16						0
1000																				
G71195.00		2.60	11.1	41.0F	7.4	97	12	2.9	5.1	1.5	0.0	46	3.8	5.7	0.9	--	.1	--	73	42
03/08/65	5050		105		7.7		.60	.24	.22	.04	.00	.75	.08	.16	.01				55	5
1345							55	22	20	4		75	8	16	1					
G71195.00		3.41	10.9	43.0F	8.0	83	9.2	1.9	3.4	1.4	0.0	44	0.5	2.0	0.3	--	.0	--	60	31
04/05/65	5050		106		7.9		.46	.16	.15	.04	.00	.72	.01	.06	.00				40	0
1000							57	20	19	5		91	1	8						
G71195.00		3.65	10.1	50.0F	7.7	76	10	2.7	4.2	1.1	0.0	39	0.6	2.8	0.4	--	.0	--	58	36
05/10/65	5050		89		7.6		.50	.22	.18	.03	.00	.64	.01	.08	.01				41	4
1330							54	24	19	3		86	1	11	1					
G71195.00		4.07	9.1	52.0F	7.9	56	8.2	0.6	2.6	0.8	0.0	32	0.0	1.1	0.4	--	.0	--	50	23
06/14/65	5050		102		7.3		.41	.05	.11	.02	.00	.52	.00	.03	.01				29	0
0915							69	8	19	3		93		5	2					
G71195.00		2.69	7.8	65.0F	7.4	72	8.1	1.7	4.5	1.7	0.0	38	1.3	1.3	0.3	--	.0	--	68	27
07/19/65	5050		100		7.9		.40	.14	.20	.04	.00	.62	.03	.04	.00				38	0
1225							51	18	26	5		90	4	6						

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME	LAB / SAMPLER	G.H. Q	DO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
							G7 1600.00 TRUCKEE RIVER NEAR TRUCKEE (52)														
G71600.00			9.0	55.0F	8.0	100	--	--	5.5	--	0.0	54	--	1.0	--	--	.1	--	--	34
11/04/64	5000		105		7.7				.24		.00	.89		.03						0
1315																				
G71600.00			10.6	42.0F	8.0	96	--	--	5.4	--	0.0	46	--	2.3	--	--	.1	--	--	35
01/18/65	5000		100		7.3				.23		.00	.75		.06						0
1300																				
G71600.00			10.5	45.0F	8.1	102	--	--	5.2	--	0.0	48	--	2.2	--	--	.2	--	--	37
03/08/65	5000		107		7.3				.23		.00	.79		.06						0
1300																				
G71600.00			10.4	47.0F	7.2	71	7.8	1.8	3.9	0.7	0.0	34	5.0	0.8	1.0	--	.0	19	47	27
05/10/65	5000		109		7.3		.39	.15	.17	.02	.00	.56	.10	.02	.02				57	0
1200							53	21	23	3		80	14	3	3					
G71600.00			8.4	62.0F	8.0	81	--	--	4.4	--	0.0	40	--	1.4	--	--	.0	--	--	31
07/19/65	5000		106		7.9				.19		.00	.66		.04						0
1110																				
G71600.00			9.2	56.0F	7.8	102	13	1.3	5.9	2.0	0.0	54	5.0	1.6	0.1	--	.0	16	59	38
09/20/65	5000		109		7.9		.65	.11	.26	.05	.00	.89	.10	.05	.00				71	0
1230							61	10	24	5		86	10	5						

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME / LAB / SAMPLER	G.H. Q	DO	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
G9 3200.00 WALKER RIVER, EAST, NEAR BRIDGEPORT (116a)																			
G93200.00 11/05/64 5000 1315	0.46	10.2 114	50.0F	8.3 8.1	252	-- 	-- 	15 .65	-- 	2.0 .07	132 2.16	-- 	1.6 .05	-- 	--	.1	--	--	93 0
G93200.00 01/19/65 5000 1230	0.17	9.9 94	38.0F	8.4 7.5	268	-- 	-- 	23 1.00	-- 	2.0 .07	134 2.20	-- 	3.1 .09	-- 	--	.2	--	--	92 0
G93200.00 03/09/65 5000 1215	0.82	9.3 92	41.0F	8.0 7.3	279	-- 	-- 	27 1.17	-- 	0.0 .00	130 2.13	-- 	5.4 .15	-- 	--	.2	--	--	80 0
G93200.00 05/11/65 5000 0915	1.77	9.8 107	48.0F	7.8 8.1	212	24 1.20 56	2.9 .24 11	15 .65 30	2.8 .07 3	0.0 .00 	108 1.77 79	17 .35 16	3.0 .08 4	1.7 .03 1	--	.1	17	134 136	72 0
G93200.00 07/20/65 5000 1130	2.33	7.2 96	64.0F	7.8 >8.4	139	-- 	-- 	7.8 .34	-- 	0.0 .00	70 1.15	-- 	1.4 .04	-- 	--	.0	--	--	53 0
G93200.00 09/21/65 5000 1045	1.47	8.6 103	55.0F	7.5 8.4	164	22 1.10 63	1.7 .14 8	9.8 .43 25	3.1 .08 5	0.0 .00 	88 1.44 86	9.0 .19 11	1.2 .03 2	1.2 .02 1	--	.0	8.6	84 100	62 0

TABLE D-2
MINERAL ANALYSIS OF SURFACE WATER

STATION NUMBER / DATE / TIME / LAB / SAMPLER	G.H. Q	CC	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
G9 2400.00 WALKER RIVER, WEST, NEAR COLEVILLE (116)																			
G92400.00 11/05/64 5000 1200	0.92	10.4 112	46.0F	8.1 7.8	145	-- 	-- 	13 .57	-- 	0.0 .00	74 1.21	-- 	2.1 .06	-- 	-- 	.2 	-- 	-- 	43 0
G92400.00 01/19/65 5000 1145	1.85	11.4 102	34.0F	8.0 7.2	86	-- 	-- 	4.7 .20	-- 	0.0 .00	44 .72	-- 	0.5 .01	-- 	-- 	.0 	-- 	-- 	33 0
G92400.00 03/09/65 5000 1115	1.79	11.2 106	37.0F	8.1 7.3	104	-- 	-- 	5.8 .25	-- 	0.0 .00	56 .92	-- 	0.8 .02	-- 	-- 	.0 	-- 	-- 	41 0
G92400.00 05/11/65 5000 1000	2.57	10.5 108	43.0F	7.4 7.3	68	8.4 .42 61	1.2 .10 14	3.5 .15 22	0.7 .02 3	0.0 .00	36 .59 87	3.0 .06 9	0.4 .01 1	1.4 .02 3	-- 	.0 	10 	40 46	26 0
G92400.00 07/20/65 5000 1030	3.33	9.5 106	49.0F	7.6 7.5	35	-- 	-- 	1.7 .07	-- 	0.0 .00	19 .31	-- 	0.3 .01	-- 	-- 	.0 	-- 	-- 	14 0
G92400.00 09/21/65 5000 1145	1.73	10.0 112	49.0F	7.6 7.5	87	13 .65 73	0.1 .01 1	4.9 .21 24	0.9 .02 2	0.0 .00	44 .72 85	5.0 .10 12	0.6 .02 2	0.8 .01 1	-- 	.0 	12 	50 59	33 0

TABLE D-3

TRACE METAL ANALYSES OF SURFACE WATER

1964 – 65

Station	Station Number	Date 1965	Constituents in parts per billion																
			Aluminum (Al)	Beryllium (Be)	Bismuth (Bi)	Cadmium (Cd)	Cobalt (Co)	Chromium (Cr)	Copper (Cu)	Iron (Fe)	Gallium (Ga)	Germanium (Ge)	Manganese (Mn)	Molybdenum (Mo)	Nickel (Ni)	Lead (Pb)	Titanium (Ti)	Vanadium (V)	Zinc (Zn)
CENTRAL VALLEY REGION (NO. 5)																			
AMERICAN RIVER AT NIMBUS DAM	22a	5-5	36	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	≤ 1.4	106	< 5.7	< 0.29	≤ 1.4	≤ 0.29	0.91	< 1.4	< 0.57	0.60	< 5.7
		9-15	16	< 1.3	< 0.67	< 3.3	< 3.3	< 3.3	< 3.3	13	< 13	< 0.67	< 3.3	< 0.67	1.0	10	1.3	1.5	< 13
AMERICAN RIVER AT SACRAMENTO	22	5-5	37	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	< 1.4	91	< 5.7	< 0.29	< 1.4	≤ 0.29	1.3	< 1.4	< 0.57	0.97	< 5.7
		9-15	21	< 1.3	< 0.67	< 3.3	< 3.3	< 3.3	< 3.3	17	< 13	< 0.67	< 3.3	< 0.67	1.7	11	< 1.3	1.7	< 13
BEAR RIVER NEAR WHEATLAND	78	5-7	180	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	< 1.4	151	< 5.7	< 0.29	< 1.4	< 0.29	2.5	< 1.4	8.9	1.1	< 5.7
		9-17	< 1.4	< 0.57	2.7	< 1.4	31	< 1.4	< 1.4		< 5.7	< 0.29	< 1.4	< 0.29	< 0.2	< 1.4	< 0.57	< 0.29	< 5.7
CACHE CREEK NEAR CAPAY	80	5-3	9.1	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	≤ 1.4	31	< 5.7	< 0.29	< 1.4	≤ 0.29	1.5	< 1.4	< 0.57	1.9	< 5.7
		9-13	9.1	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	< 1.4	9.7	< 5.7	< 0.29	< 1.4	< 0.29	2.1	< 1.4	< 0.57	2.1	< 5.7
CALAVERAS RIVER NEAR STOCKTON	16b	MAY	DRY	NO SAMPLE															
		9-2	19	< 1.3	< 0.67	< 3.3	< 3.3	< 3.3	< 3.3	16	< 13	< 0.67	< 3.3	< 0.67	2.4	10	1.3	5.7	< 13
COSUMNES RIVER AT McCONNELL	94a	5-5	31	< 0.57	< 0.29	< 1.4	2.1	< 1.4	< 1.4	160	< 5.7	< 0.29	< 1.4	< 0.29	0.68	< 1.4	0.57	1.2	< 5.7
COSUMNES RIVER AT MICHIGAN BAR	94	9-2	< 1.4	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	< 1.4	9.4	< 5.7	< 0.29	< 1.4	< 0.29	< 0.29	< 1.4	< 0.57	2.5	< 5.7
DELTA CROSS CHANNEL AT WALNUT GROVE	98	5-4	70	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	≤ 1.4	77	< 5.7	< 0.29	< 1.4	≤ 0.29	1.4	< 1.4	3.1	2.9	< 5.7
		9-14	25	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	< 1.4	41	< 5.7	< 0.29	< 1.4	< 0.29	0.8	< 1.4	< 0.57	6.0	< 5.7
FEATHER RIVER AT NICOLAUS	20	5-7	49	< 0.57	< 0.29	< 1.4	≤ 1.4	< 1.4	7.4	124	< 5.7	< 0.29	≤ 1.4	< 0.29	1.0	< 1.4	< 0.57	1.4	< 5.7
		9-17	< 1.4	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	< 1.4	5.7	< 5.7	< 0.29	< 1.4	< 0.29	< 0.29	< 1.4	< 0.57	< 0.29	< 5.7
FEATHER RIVER NEAR OROVILLE	19	5-7	83	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	< 1.4	206	< 5.7	< 0.29	< 1.4	< 0.29	0.54	< 1.4	3.4	1.5	< 5.7
		9-17	< 1.4	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	< 1.4	20	< 5.7	< 0.29	< 1.4	< 0.29	< 0.29	< 1.4	< 0.57	< 0.29	< 5.7
MOKELUMNE RIVER AT WOODBRIDGE	23	5-5	100	< 0.57	< 0.29	< 1.4	2.3	< 1.4	7.4	83	< 5.7	< 0.29	< 1.4	< 0.29	0.80	< 1.4	4.0	0.89	< 5.7
		9-15	41	< 1.3	< 0.67	< 3.3	< 3.3	< 3.3	< 3.3	167	< 13	< 0.67	< 3.3	< 0.67	0.70	15	2.3	1.7	< 13
OLD RIVER AT MANDEVILLE ISLAND	112	5-17	189	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	< 1.4	343	< 5.7	< 0.29	< 1.4	≤ 0.29	0.86	< 1.4	14	4.6	< 5.7
		9-7	68	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	< 1.4	> 50	< 5.7	< 0.29	< 1.4	< 0.29	1.1	< 1.4	2.7	5.7	< 5.7
PIT RIVER NEAR CANBY	17a	5-5	667	< 1.3	< 0.67	< 3.3	6.3	< 3.3	< 3.3	320	< 13	< 0.67	< 3.3	< 0.67	0.6	< 3.3	0.8	3.7	< 5.7
		9-16	4.3	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	< 1.4	17	< 5.7	< 0.29	< 1.4	< 0.29	0.6	< 1.4	0.8	3.7	< 5.7
SACRAMENTO RIVER AT BEND	12c	5-6	127	< 1.3	< 0.67	< 3.3	< 3.3	< 3.3	< 3.3	260	< 13	< 0.67	< 3.3	< 0.67	17	< 3.3	4.3	2.1	< 13
		9-13	111	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	< 1.4	> 50	< 5.7	< 0.29	< 1.4	< 0.29	2.4	< 1.4	5.7	3.1	< 5.7
SACRAMENTO RIVER AT COLUSA	13b	5-3	93	< 1.3	< 0.67	< 3.3	< 3.3	< 3.3	≤ 3.3	170	< 13	< 0.67	< 3.3	< 0.67	3.2	< 3.3	2.7	2.9	< 1.3
		9-15	77	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	28	> 50	< 5.7	< 0.29	< 1.4	< 0.29	2.1	< 1.4	2.6	2.4	< 5.7
SACRAMENTO RIVER ABOVE COLUSA TROUGH	14b	5-3	73	< 1.3	< 0.67	< 3.3	< 3.3	< 3.3	< 3.3	170	< 13	< 0.67	< 3.3	< 0.67	1.7	< 3.3	4.0	4.5	< 13
		9-15	36	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	< 1.4	> 50	< 5.7	< 0.29	< 1.4	< 0.29	1.2	< 1.4	1.3	2.9	< 5.7
SACRAMENTO RIVER NEAR HAMILTON CITY	13	5-3	83	< 1.3	< 0.67	< 3.3	< 3.3	< 3.3	< 3.3	160	< 13	< 0.67	< 3.3	< 0.67	2.0	< 3.3	2.0	2.2	< 13
		9-15	119	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	< 1.4	> 50	< 5.7	< 0.29	< 1.4	< 0.29	2.9	< 1.4	4.3	2.8	< 5.7
SACRAMENTO RIVER AT FREEPORT	15b	5-4	56	< 0.57	< 0.29	< 1.4	< 1.4	< 1.4	< 1.4	120	< 5.7	< 0.29	< 1.4	≤ 0.29	1.4	< 1.4	1.4	2.2	< 5.7
		9-14	25	< 1.3	< 0.67	< 3.3	< 3.3	< 3.3	< 3.3	47	< 13	< 0.67	< 3.3	< 0.67	2.1	13	1.9	9.3	< 13

TABLE D-3

TRACE METAL ANALYSES OF SURFACE WATER

1964 – 65

Station	Station Number	Date 1965	Constituents in parts per billion																
			Aluminum (Al)	Beryllium (Be)	Bismuth (Bi)	Cadmium (Cd)	Cobalt (Co)	Chromium (Cr)	Copper (Cu)	Iron (Fe)	Gallium (Ga)	Germanium (Ge)	Manganese (Mn)	Molybdenum (Mo)	Nickel (Ni)	Lead (Pb)	Titanium (Ti)	Vanadium (V)	Zinc (Zn)
SACRAMENTO RIVER AT KESWICK	12	5-4	227	<1.3	<0.67	<3.3	<3.3	<3.3	<3.3	313	< 13	<0.67	< 3.3	<0.67	3.3	< 1.3	8.7	1.8	< 13
		9-14	274	<0.57	< 0.29	<1.4	0.8	<1.4	<1.4	> 50	<5.7	<0.29	4.0	<0.29	3.7	< 1.4	6.6	2.7	<5.7
SACRAMENTO RIVER AT RIO VISTA	16	5-4	103	<0.57	<0.29	<1.4	<1.4	<1.4	<1.4	194	<5.7	<0.29	<1.4	≤0.29	1.3	2.0	3.7	4.0	<5.7
		9-14	59	<1.3	< 0.67	<3.3	<3.3	<3.3	<3.3	56	< 13	<0.67	< 3.3	<0.67	2.7	11	2.5	11	< 13
SAN JOAQUIN RIVER AT ANTIOCH	28	5-4	171	<0.57	<0.29	<1.4	<1.4	<1.4	≤1.4	143	<5.7	<0.29	<1.4	≤0.29	1.9	< 1.4	5.1	3.7	<5.7
STONY CREEK BELOW BLACK BUTTE DAM	13c	5-3	93	<1.3	<0.67	<3.3	<3.3	<3.3	≤3.3	170	< 13	<0.67	< 3.3	<0.67	3.2	< 3.3	2.7	2.9	<1.3
YUBA RIVER AT MARYSVILLE	21	5-7	34	<0.57	>0.29	<1.4	3.1	<1.4	<1.4	97	<5.7	<0.29	<1.4	<0.29	1.0	< 1.4	3.7	0.74	<5.7
		9-17	<1.4	<0.57	<0.29	<1.4	<1.4	<1.4	<1.4	7.1	<5.7	<0.29	< 1.4	<0.29	< 0.29	< 1.4	<0.57	< 0.29	<5.7
LAHONTAN REGION (NO. 6)																			
LAKE TAHOE AT TAHOE	38	5-10	11	<0.57	<0.29	<1.4	<1.4	<1.4	<1.4	83	<5.7	<0.29	<1.4	2.7	0.69	< 1.4	≤0.57	1.0	<5.7
		9-20	<1.4	<0.57	<0.29	<1.4	<1.4	<1.4	<1.4	17	<5.7	<0.29	< 1.4	<0.29	< 0.29	<1.4	<0.57	<0.29	<5.7
TRUCKEE RIVER NEAR FARAD	53	5-10	19	<0.57	< 0.29	<1.4	<1.4	<1.4	4.3	31	<5.7	<0.29	<1.4	≤0.29	0.40	< 1.4	<0.57	1.2	<5.7
		9-20	34	<0.57	<0.29	< 1.4	<1.4	<1.4	<1.4	>2860	<5.7	<0.29	< 1.4	<0.29	0.6	1.6	1.5	1.2	<5.7

TABLE D-4

MISCELLANEOUS CONSTITUENTS

SURFACE WATER

1964-65

Station	Date	Coliform MPN/ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO_4 in ppm
American River, Middle Fork near Auburn (22b) A 7 3100.00	11/12			60			
	1/14			15			
	3/15			2			
	5/14			20	0.0	0.00	0.05
	7/13			1			
	9/2			1	0.0	0.00	0.01
American River at Nimbus Dam(22a) A 7 1110.00	10/6	23	62	1			
	11/12	620	23	2			
	12/15	230	13	4			
	1/6	23	23	100			
	2/1	2.3	2.3	35			
	3/1	0.62	2.3	15			
	4/13	2.3	23	11			
	5/5	0.62	0.23	15	0.0	0.00	0.05
	6/14	6.2	6.2	2			
	7/13	230	62	1			
	8/9	62	2.3	1			
	9/15	62	6.2	1	0.0	0.00	0.00
American River at Sacramento(22) A 0 7140.00	10/6	62	23	1			
	11/12	62	23	5			
	12/7	6.2	23	2			
	1/6	23	62	120			
	2/1	2.3	23	35			
	3/3	0.62	1.3	15			
	4/5	5.0	6.2	6			
	5/5	6.2	2.3	6	0.0	0.00	0.05
	6/16	50	230	5			
	7/13	13	62	1			
	8/9	23	9.5	2			
	9/15	23	23	2	0.0	0.00	0.08
American River, South Fork near Lotus (22c) A 7 4150.00	11/12			100			
	1/12			15			
	3/15			2			
	5/14			6	0.0	0.00	0.00
	7/1			1			
	9/2			4	0.0	0.00	0.00

TABLE D-4

MISCELLANEOUS CONSTITUENTS

SURFACE WATER

1964-65

Station	Date	Coliform MPN/ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO_4 in ppm
Bear River near Wheatland (78)	10/9	230	62	2			
A 0 6550.00	11/13	23	62	8			
	12/11	5.0	13	5			
	1/8	230	62	300			
	2/5	2.3	6.2	100			
	3/5	2.3	6.2	60			
	4/13	23	23	35			
	5/7	230	23	30	0.0	0.00	0.00
	6/18	6.2	2.3	6			
	7/16	62	2.3	2			
	8/13	230	230	3			
	9/17	13	23	1	0.0	0.00	0.01
Cache Creek near Capay (80)	10/7			1			
A 8 1120.00	11/10			35			
	12/8			40			
	1/4			650			
	2/2			40			
	3/2			2			
	4/6			7			
	5/3			2	0.0	0.00	0.10
	6/15			5			
	7/14			16			
	8/10			>20			
	9/13			20	0.0	0.00	0.17
Calaveras River below New Hogan Dam (16c)	10/6	Dry					
B 2 5300.00	11/2			1			
	12/1			2			
	1/5	Dry					
	2/2	23	13	15			
	3/1	21	23	9			
	4/5	2.3	2.1	10			
	5/4	23	2.3	9	0.0	0.00	0.10
	6/4	5.0	2.3	5			
	7/12			1			
	8/9			3			
	9/13			10	0.0	0.00	0.07

TABLE D-4

MISCELLANEOUS CONSTITUENTS

SURFACE WATER

1964-65

Station	Date	Coliform MPN/ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO_4 in ppm
Calaveras River above New Hogan Dam (16d) B 2 5898.50	10/6	Dry					
	11/2			1			
	12/1			2			
	1/5			10			
	2/1			2			
	3/1	62	6.0	1			
	4/5	230	130	5			
	5/4	62	230	1	0.0	0.00	0.10
	6/14	6.2	50	1			
	7/12			1			
	8/9			1			
	9/13			1	0.0	0.00	0.03
Calaveras River at Jenny Lind (16a) B 0 2590.00	10/13	Dry					
	11/16			3			
	12/1			1			
	1/11			25			
	2/8			10			
	3/1			8			
	4/1			10			
	5/18			5	0.0	0.00	0.00
	6/10			2			
	7/1			1			
	8/2			<1			
	9/2			1	0.0	0.00	0.00
Calaveras River at Stockton (16b) B 0 2520.00	10/13	Dry					
	11/11	Dry					
	12/1	Dry					
	1/6			260			
	2/17			7			
	3/11			5			
	4/1			25			
	5/17	Dry					
	6/10			3			
	7/2			10			
	8/2			16			
	9/2			20	0.0	0.00	0.01
Cosumnes River at McConnell (94a) B 0 1125.00	11/12	230	2400	120			
	1/6	500	230	200			
	3/4	6.2	2.3	9			
	5/5	62	23	20	0.0	0.00	0.00
	7/13	2.3	5.0	2			
	9/15	Dry					

TABLE D-4

MISCELLANEOUS CONSTITUENTS

SURFACE WATER

1964-65

Station	Date	Coliform MPN/ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO_4 in ppm
Cosumnes River at Michigan Bar (94)	11/12			20			
	1/12			10			
B 1 1150.00	3/15			4			
	5/18			2	0.0	0.00	0.00
	7/1			2			
	9/2			1	0.0	0.00	0.00
Delta Cross Channel near Walnut Grove (98)	10/5	230	230	7			
	11/9	23	62	1			
B 9 1700.00	12/9	2400	1300	9			
	1/5	230	620	220			
	2/4	230	620	150			
	3/3	2400	2400	20			
	4/7	230	620	25			
	5/4	62	230	20	0.0	0.00	0.05
	6/16	230	62	20			
	7/14	6.2	6.2	20			
	8/11	23	13	>10			
	9/14	62	23	5	0.0	0.00	0.24
Feather River, Middle Fork near Merrimac (19b)	10/14			1			
	11/19			1			
A 5 5100.00	12/3			1			0.05
	1/26			20			*0.15
	2/5			7			*0.10
	3/12			4			*0.10
	4/1			5			0.10
	5/13			8	0.0	0.00	*0.05
	6/11			6			*0.10
	7/8			10			0.10
	8/6			<1			
	9/3			1	0.0	0.00	0.01
Feather River at Nicolaus (20)	10/9	6.2	23	14			
A 0 5103.00	11/13	230	23	10			
	12/11	23	6.2	10			
	1/8	230	62	200			
	2/5	230	230	30			
	3/5	230	230	20			
	4/9	230	50	35			
	5/7	620	23	30	0.0	0.00	0.00
	6/18	23	62	25			
	7/16	50	62	18			
	8/13	23	230	7			
	9/17	6.2	6.2	15	0.0	0.00	0.01

*Total phosphate

TABLE D-4

MISCELLANEOUS CONSTITUENTS

SURFACE WATER

1964-65

Station	Date	Coliform MPN/ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO_4 in ppm
Feather River, North Fork at Big Bar (19a) A 5 3140.00	10/9			1			
	11/20			2			
	12/4			1			0.05
	1/15			15			*0.20
	2/5			7			*0.10
	3/10			3			*0.00
	4/9			20			0.05
	5/12			6	0.0	0.00	*0.05
	6/18			1			*0.05
	7/21			1			
	8/13			2			
	9/8			1	0.0	0.00	0.01
Feather River near Oroville(19) A 5 1140.00	10/9			1			
	11/13	23	2.3	7			
	12/11	130	23	25			0.05
	1/8	62	23	60			*0.10
	2/5	23	62	15			*0.05
	3/5	6.2	23	8			*0.00
	4/9	21	230	30			0.05
	5/7	6.2	6.2	20	0.0	0.00	*0.05
	6/18	13	23	8			*0.05
	7/16	6.2	6.2	1			
	8/13	13	13	4			
	9/17	6.2	6.2	3	0.0	0.00	0.00
Feather River below Shanghai Bend (20a) A 0 5120.00	10/9			2			
	11/20			3			
	12/11			6			
	1/8			120			
	2/5			35			
	3/15			15			
	4/9			25			
	5/14			20	0.0	0.00	0.00
	6/18			35			
	7/16			3			
	8/13			4			
	9/17			1	0.0	0.00	0.04

*Total phosphate

TABLE D-4

MISCELLANEOUS CONSTITUENTS

SURFACE WATER

1964-65

Station	Date	Coliform MPN/ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO_4 in ppm
Feather River, South Fork below Ponderosa Dam (19c) A 5 6080.00	10/14			1			
	11/19			3			
	12/3			1			0.05
	1/15			15			0.10
	2/9			10			*0.00
	3/12			15			*0.00
	4/2			10			0.05
	5/13			1	0.0	0.00	*0.05
	6/11			5			*0.10
	7/8			1			0.15
	8/6			<1			
	9/3			1	0.0	0.00	0.00
Feather River, West Branch near Yankee Hill (19d) A 5 2100.00	11/20			1			
	12/4			1			0.05
	1/15			5			0.15
	2/5			8			*0.05
	3/10			2			*0.05
	4/9			20			0.05
	5/13			1	0.0	0.00	*0.00
	6/18			2			*0.10
	7/21			1			
	8/13			30			
	9/8			1	0.0	0.00	0.00
Grant Line Canal at Tracy Road Bridge (103a) B 9 5300.00	10/8	2400	2400	9			
	11/11	23	62	15			
	12/10	62	230	4			
	1/7	23	62	40			
	2/3	230	62	30			
	3/4	23	6.2	10			
	4/8	620	62	25			
	5/6	62	62	30	0.0	0.00	0.10
	6/17	130	230	25			
	7/15	13	62	22			
	8/12	6.2	13	20			
	9/16	23	5.0	30	0.0	0.01	0.48
Indian Creek near Crescent Mills ** (17d) A 5 4320.00	11/6			4			
	1/27	240	240	30			
	3/10	7.0	6.0	15			
	5/12	10	5.0	15	0.0	0.00	0.05
	7/21	100	100	3			
	9/22	32	34	45	0.0	0.00	0.22

* Total phosphate

**Coliform by Millipore Filter method

TABLE D-4

MISCELLANEOUS CONSTITUENTS

SURFACE WATER

1964-65

Station	Date	Coliform MPN/ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO_4 in ppm
Indian Slough near Brentwood (107)	10/13			30			
	11/18			7			
B 9 5279.80	12/1			1			
	1/7			40			
	2/8			30			
	3/11			20			
	4/12			30			
	5/17			55	0.0	0.01	0.15
	6/10			80			
	7/1			52			
	8/16			35			
	9/1			35	0.0	0.00	0.05
Italian Slough near Mouth (106)	10/8						
B 9 5270.20	11/5			30			
	12/3			20			
	1/8			20			
	2/3			30			
	3/3			20			
	4/8			25			
	5/6			40	0.0	0.00	0.10
	6/17			40			
	7/15			37			
	8/13			37			
	9/17			25	0.0	0.01	0.22
Little Potato Slough at Terminous (99)	11/9			15			
	1/5			40			
B 9 4120.10	3/11			50			
	5/17			30	0.0	0.00	0.00
	7/2			17			
	9/7			20	0.0	0.00	0.10
Mokelumne River near Lancha Plana	11/16			9			
	1/11			40			
Molelumne River below Camanche Dam (23a)	3/1			10			
	5/18			3	0.0	0.00	0.00
	7/1			1			
B 2 1170.00	9/2			1	0.0	0.00	0.01

TABLE D-4

MISCELLANEOUS CONSTITUENTS

SURFACE WATER

1964-65

Station	Date	Coliform MPN/ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO_4 in ppm
Mokelumne River at Woodbridge (23)	11/12	230	23	1			
	1/6	23	62	60			
B 9 4300.00	3/1	2.3	0.23	10			
	5/5	2.3	5.0	15	0.0	0.00	0.00
	7/13	6.2	2.3	4			
	9/15	23	62	4	0.0	0.00	0.02
Old River at Clifton Ct. Ferry (104)	10/8	13	50	15			
	11/11	620	130	15			
B 9 5340.00	12/10	50	23	15			
	1/7	500	620	40			
	2/3	62	62	30			
	3/4	23	6.2	10			
	4/8	23	230	25			
	5/6	23	23	25	0.0	0.00	0.10
	6/17	95	62	25			
	7/15	23	2.3	42			
	8/12	6.2	62	35			
	9/16	1.4	23	25	0.0	0.01	0.19
Old River at Mandeville Island (112)	10/13			15			
	11/16			10			
B 9 5220.00	12/1			15			
	1/11			30			
	2/8			40			
	3/11			30			
	4/1			20			
	5/17			30	0.0	0.00	0.10
	6/10			50			
	7/2			35			
	8/2			25			
	9/7			15	0.0	0.00	0.11
Old River at Orwood Bridge (108)	10/13			20			
	11/18			10			
B 9 5320.20	12/1			1			
	1/11			50			
	2/8			20			
	3/11			20			
	4/12			25			
	5/17			40	0.0	0.04	0.20
	6/10			60			
	7/2			33			
	8/2			broken in transit			
	9/1			25	0.0	0.00	0.10

TABLE D-4

MISCELLANEOUS CONSTITUENTS

SURFACE WATER

1964-65

Station	Date	Coliform MPN/ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO_4 in ppm
Old River near Tracy (103)	10/8	290	28	20			
B 9 5380.00	11/11	≥24000	24000	20			
	12/10	230	62	10			
	1/7	230	2400	30			
	2/3	23	23	10			
	3/4	≥24000	62	25			
	4/8	620	620	15			
	5/6	23	23	15	0.0	0.00	0.10
	6/17	620	62	30			
	7/15	62	130	35			
	8/12	2400	20	<30			
	9/16	62	6.2	30	0.0	0.01	0.50
Rock Slough near Knightsen (109)	10/8	62	62	20			
B 9 5220.00	11/11	230	62	15			
	12/10	2.3	23	20			
	1/7	23	620	50			
	2/3	6.2	13	20			
	3/4	6.2	2.3	30			
	4/7	62	2.3	20			
	5/6	23	50	40	0.0	0.00	0.05
	6/17	23	130	50			
	7/15	23	62	36			
	8/12	23	62	35			
	9/16	6.2	62	25	0.0	0.01	0.20
		L.B.	R.B.				
Sacramento River at Freeport	10/5	62	23	10			
B 9 1849.90 (15b)		62	23				
	11/9	2400	2400	1			
		620	620				
	12/9	7000	620	3			
		≥24000	620				
	1/5	620	230	180			
		2400	620				
	2/4	2400	620	60			
		620	230				
	3/3	620	620	20			
		2400	230				
	4/7	7000	230	30			
		620	230				
	5/4	62	50	30	0.0	0.00	0.15
		50	6.2				
	6/16	62	62	30			
		620	230				
	7/14	62	6.2	10			
		6.2	23				

TABLE D-4

MISCELLANEOUS CONSTITUENTS

SURFACE WATER

1964-65

Station	Date	Coliform MPN/ml L.B.	Coliform MPN/ml R.B.	Turbidity in units	MBAS in ppm	Arsenic in ppm	PO_4 in ppm
(continued)							
Sacramento River at Freeport (15b)	8/11	23	2.3	<20			
		23	2.3				
B 9 1849.90	9/14	230	13	20	0.0	0.00	0.30
		62	23				
		L.B.	R.B.				
Sacramento River at Rio Vista (16)	10/5	62	62	15			
		62	62				
B 9 1210.00	11/9	6.2	6.2	15			
		6.2	23				
	12/9	62	62	20			
		62	62				
	1/5	230	230	300			
		620	230				
	2/4	230	620	50			
		230	500				
	3/3	620	620	30			
		2400	620				
	4/7	230	230	25			
		230	2400				
	5/4	2400	620	80	0.0	0.00	0.20
		230	230				
	6/16	23	500	40			
		62	130				
	7/14	1.3	23	15			
		6.2	2.3				
	8/11	2.3	62	30			
		2.3	62				
	9/14	2.3	6.2	20	0.0	0.00	0.27
		6.2	13				
San Joaquin River at Antioch (28)	10/5	2400	230	35			
	11/9	62	23	25			
B 9 5020.00	12/9	6.2	23	20			
	1/5	50	62	130			
	2/4	620	23	57			
	3/4	62	23	30			
	4/13	23	62	30			
	5/4	13	23	70	0.0	0.00	0.20
	6/6	23	21	40			
	7/14	0.23	2.3	27			
	8/11	62	2.1	35			
	9/14	620	230	30	0.0	0.00	0.16

TABLE D-4

MISCELLANEOUS CONSTITUENTS

SURFACE WATER

1964-65

Station	Date	Coliform MPN/ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO_4 in ppm
San Joaquin River at Garwood Bridge (101) B 9 5710.00	10/8	130	2400	2			
	11/11	2400	620	20			
	12/10	230	230	9			
	1/7	62	230	30			
	2/3	62	62	20			
	3/4	23	13	10			
	4/8	620	230	11			
	5/6	62	23	30	0.0	0.00	0.20
	6/17	500	1300	20			
	7/15	620	290	20			
	8/12	620	620	20			
	9/16	2400	2400	25	0.0	0.01	1.42
San Joaquin River at Mossdale Bridge (102) B 9 5820.00	10/8	230	230	10			
	11/11	130	230	20			
	12/10	620	2400	9			
	1/7	62	62	40			
	2/3	50	62	30			
	3/4	62	23	10			
	4/8	2400	7000	49			
	5/6	130	2400	20	0.0	0.00	0.15
	6/17	230	230	25			
	7/15	62	62	13			
	8/12	6.2	0.62	30			
	9/16	6.2	6.2	10	0.0	0.01	0.46
Stockton Ship Channel on Rindge Island (100) B 9 5619.80	10/15			20			
	11/11	23	130	7			
	12/10	23	13	7			
	1/6	230	620	40			
	2/3	23	23	20			
	3/1	6.2	13	15			
	4/8	23	62	25			
	5/5	23	2.3	30	0.0	0.00	0.40
	6/17	620	23	30			
	7/13	6.2	13	30			
	8/12	23	23	25			
	9/15	5.0	23	30	0.1	0.00	0.15
Yuba River at Marysville (21) A 0 6120.00	11/13	23	23	5			
	1/8	21	23	100			
	3/5	2.3	0.62	7			
	5/7	6.2	0.62	25	0.0	0.00	0.00
	7/16	62	23	3			
	9/17	6.2	6.2	1	0.0	0.00	0.00

TABLE D-4

MISCELLANEOUS CONSTITUENTS

SURFACE WATER

1964-65

Station	Date	Coliform MPN/ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO_4 in ppm
Yuba River near Smartville (21a)	11/19			3			
A 6 1100.00	1/8			140			
	3/5			5			
	5/7			3	0.0	0.00	0.00
	7/16			1			
	9/8			1	0.0	0.00	0.01

TABLE D-4

MISCELLANEOUS CONSTITUENTS

SURFACE WATER

1964-65

Station	Date	Coliform MPN/ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO_4 in ppm
Carson River, East Fork near Markleeville (115) G 8 3420.20	11/5	0.091	0.43	1			
	1/19	0.23	0.091	7			
	3/9	0.091	0.23	3			
	5/11	0	0	2	0.0	0.00	0.05
	7/20	1.5	0.93	4			
	9/21	2.4	1.5	1	0.0	0.01	0.05
Carson River, West Fork at Woodfords (115a) G 8 2300.00	11/5	0.93	0.23	0			
	1/19	15	0.43	0			
	3/9	0.23	0.43	0			
	5/11	0.091	0.061	0	0.0	0.00	0.00
	7/20	1.5	11	0			
	9/21	0.93	0.43	0	0.0	0.00	0.00
Lake Tahoe at Tahoe (38) G 7 1710.00	11/4	0.93	0.43	1			
	1/18	0.15	0.091	1			
	3/8	0.036	<0.036	2			
	5/10	0.43	0.23	5	0.0	0.00	0.00
	7/19	0.23	0.43	0			
	9/20	0.23	0.23	0	0.0	0.00	0.00
Truckee River near Farad (53) G 7 1195.00	10/6	2.3	2.3	2			*0.13
	11/4	2.4	0.93	3			*0.03
	12/7	2.3	6.2	2			*0.04
	1/18	0.23	0.23	14			*0.09
	2/11	1.3	2.3	20			*0.06
	3/8	0.95	0.091	4			*0.02
	4/5	0.62	0.62	20			*0.03
	5/10	0.23	0.036	5.2	0.0		*0.05
	6/14	6.2	23	10			*0.06
	7/19	2.4	2.9	105			*0.71
	8/9	0.50	0.62	5			*0.04
	9/20	11	2.4	4			*0.06
Truckee River near Truckee (52) G 7 1600.50	11/4	0.43	0.43	1			
	1/18			1			
	3/8			1			
	5/10			4	0.0	0.00	0.00
	7/19			1			
	9/20			1	0.0	0.00	0.01

*Total phosphate

TABLE D-4

MISCELLANEOUS CONSTITUENTS

SURFACE WATER

1964-65

Station	Date	Coliform MPN/ml		Turbidity in units	MBAS in ppm	Arsenic in ppm	PO_4 in ppm
Walker River, East near Bridgeport (116a) G 9 3200.00	11/5	0.091	0.091	1			
	1/19	0.091	0.15	10			
	3/9	2.4	0.23	10			
	5/11	0.23	0.036	10	0.0	0.01	0.20
	7/20	0.23	0	2			
	9/21	0.21	0.43	15	0.0	0.01	0.15
Walker River, West near Coleville (116) G 9 2400.00	11/5	0.43	0.15	2			
	1/19	0.43	0.43	1			
	3/19	0.036	0.036	1			
	5/11	0.75	0.23	1	0.0	0.00	0.00
	7/20	4.6	2.4	13			
	9/21	2.4	0.43	1	0.0	0.00	0.00

TABLE D-5

DESCRIPTION OF SALINITY
OBSERVATION STATIONS

STATIONS	MAP REFERENCE NUMBER	TIME INTERVAL (a)		LOCATION
		Hours	Min.	
				SUISUN BAY
Crockett		3	30	West end of Carquinez Strait, south shore, 0.2 mile east of Carquinez Bridge on wharf of C and H Sugar Refinery Corporation.
Martinez		3	50	Sampled from Shell Oil Company dock, about 0.6 mile downstream from Southern Pacific Company railroad bridge.
Port Chicago		4	20	South shore of Suisun Bay at U. S. Naval ammunition loading wharf below Port Chicago.
Middle Point				South shore of Suisun Bay, about 0.5 mile upstream from Middle Point at Allied Chemical Corporation yard.
Pittsburg	1	5	00	East end of Suisun Bay, south shore, at Pittsburg Yacht Harbor.
				SACRAMENTO RIVER DELTA
Collinsville	2	5	25	Sacramento River, north bank, at junction with San Joaquin River.
Emmaton	3	5	45	Sacramento River, south bank, 5.9 miles downstream from Rio Vista.
Threemile Slough Bridge	4	5	55	At junction of slough and Sacramento River.
Rio Vista Bridge	5	6	05	At highway bridge near northerly limits of Rio Vista.
Isleton Bridge	6	6	30	Sacramento River, one mile upstream from Isleton.
				SAN JOAQUIN RIVER DELTA
Antioch	7	5	55	San Joaquin River at City Water Works pumping plant.
Antioch Bridge	8	6	10	South shore San Joaquin River at Antioch Bridge.
Jersey Island	9	6	20	San Joaquin River, left bank, approximately 1.5 miles below mouth of False River.
Threemile Slough	10	6	30	Threemile Slough, west bank, of junction of slough with the San Joaquin River.
False River	11	6	40	False River, north bank, approximately 0.75 mile upstream from junction with San Joaquin River.
San Andreas Landing	12	6	55	San Joaquin River, right bank, one mile below the mouth of the Mokelumne River.
Dutch Slough	13	7	05	At Bethel Island Bridge.
Mossdale Bridge	14	10	50	San Joaquin River at U. S. Highway 50 crossing about 3 miles southwest of Lathrop.

(a) Time interval between high tide at Golden Gate and time for taking samples at station.

TABLE D-6

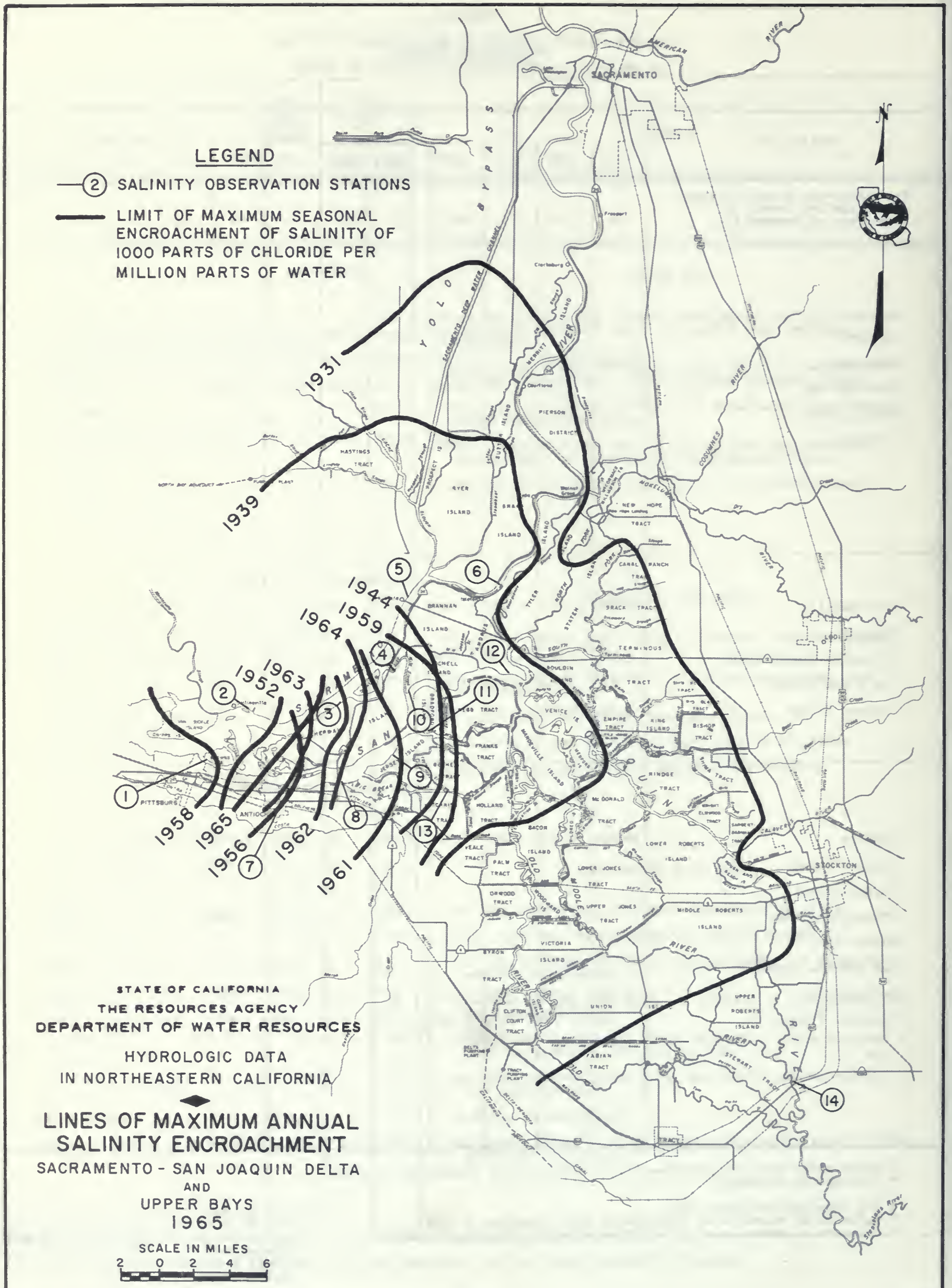
MAXIMUM OBSERVED SALINITY AT BAY AND DELTA STATIONS
FOR SELECTED YEARS
In parts of chloride per million parts of water*

Station (a)	1931	1939	1944[b]	1952	1956[c]	1958	1959	1961	1962	1963	1964	1965
Sacramento-San Joaquin System Unimpaired Runoff in percent of average (d)	34	49	62	168	175	166	66	61	92	132	63	152**
Suisun Bay												
Crockett				13,200	15,300	11,900	15,000	19,900	13,900	13,100	14,600	13,000
Martinez	16,900	16,400		8,900	11,900	7,150	10,200	11,600	12,700	11,500	12,900	11,200
Port Chicago				6,900	9,750	5,830	15,640	11,900	9,370	9,200	11,200	9,710
Middle Point											10,100	9,840
Pittsburg				1,200	3,440	1,200	5,110	3,920	3,980	1,350	3,280	1,080
Sacramento River Delta												
Collinsville	12,600	10,400	4,700	783	2,280	550	5,430	4,300	2,430	1,980	3,730	2,080
Emmaton					158	29	2,600	2,070	841	382	1,470	276
Threemile Slough Bridge	8,600	5,900	1,610	175	56	18	1,480	633	232	134	459	103
Rio Vista Bridge	7,400	4,050	550	175	21	17	219	69	52	38	690	26
Isleton Bridge	6,350	2,500	50	125	17	14	20	18	18	14	20	13
San Joaquin River Delta												
Antioch	12,400	9,200	4,000	354	1,270	184	3,410	2,930	1,770	1,040	2,500	920
Antioch Bridge					160	122	2,570	1,360	479	317	892	216
Jersey Island					152	52	1,220		84	136	863	147
Threemile Slough					82	45	1,900	489	130	56	262	60
False River												174
San Andreas Landing					66	46	248	345	57	41	72	29
Dutch Slough	5,100	2,250	690	88	107	110	1,044	825	192	98	434	68
Mossdale Bridge	120	160	130	122	206	219	261	346	308	196	318	170

* Ocean water contains approximately 18,200 parts per million of chloride.
** Preliminary estimate.

a For location see Figure D-5.
b Releases of stored water from Shasta Lake commenced in 1944.
c Releases of stored water from Folsom Reservoir commenced in 1956.

d Average taken as mean annual unimpaired flow at foothill stations of major tributaries for 50-year period October 1907 through September 1957 and do not include runoff from minor tributaries and from valley floor.



STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

HYDROLOGIC DATA
IN NORTHEASTERN CALIFORNIA

LINES OF MAXIMUM ANNUAL SALINITY ENCROACHMENT

SACRAMENTO - SAN JOAQUIN DELTA
AND
UPPER BAYS
1965

SCALE IN MILES
2 0 2 4 6

TABLE -D-7

SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS*
In parts of chloride per million parts of water

Station	August 1965							
	2	6	10	14	18	22	26	30
				Suisun Bay				
Crockett	12700	e12800	12400	11300	10900	e11600	11600	12200
Martinez	11100	e11200	10200	10900			10400	10400
Port Chicago			a5270	a5100	6780	e7560	6700	5670
Middle Point		e7050	6460	6010				
Pittsburg	a1300	a1080	a817	a845	ad644	abd431		bd498
				Sacramento River Delta				
Collinsville	a1250	a919	a923	1050	a520		a367	a688
Emmaton	a270	a96	a110	128	120	a68	a74	a175
Threemile Slough Bridge	a61		abd63	45	a24		46	a31
Rio Vista Bridge	9	22	16	20	11	14	17	9
Isleton Bridge	8	8	8	10	9	9	9	8
				San Joaquin River Delta				
Antioch	746	a415	a424		a308	a224	408	a307
Antioch Bridge	172	a194	ad216	163	125	a110	a108	a67
Jersey Island	a130	bd77	a94	147	a55	abd44	a44	a70
Threemile Slough	a53		a39	ad27	a25	a30	a18	a22
False River	ad85	a54	a67	88	a35	a34	a37	a43
San Andreas Landing	ad12	ad10	d13	d15	ad14	ad13	a12	ad12
Dutch Slough	a53	a58	a64	68	a56	a50	44	a41
Mossdale Bridge		d164	a150	108				

Station	September 1965							
	2	6	10	14	18	22	26	30
				Suisun Bay				
Crockett	9970	11100	11100	9070	9110	10000	10100	8450
Martinez	8830	abd7540	a6660	6950	a5660		7370	5270
Port Chicago								
Middle Point			d3380	2190	5120	a2240		
Pittsburg		abd331	a313		ad151	a143	184	
				Sacramento River Delta				
Collinsville	a223	a297	a287	a123		a108		
Emmaton	a53	a47	71	a50	a21	a25	25	28
Threemile Slough Bridge	a27	a25	19	a15	a12	a15	a15	a12
Rio Vista Bridge	14	10	11	10	11	11	10	9
Isleton Bridge	b12	9	11	10	13	12	10	8
				San Joaquin River Delta				
Antioch	a154	a119	192	a100		93	97	
Antioch Bridge	a67	a55	a38	a43	a27	a30	30	a26
Jersey Island	abd28	abd27	43	a21	a16	a19	a21	a18
Threemile Slough		a16	a14	a14	a13	a15		
False River	a24	a23	24	a17	a15	a15	a14	a16
San Andreas Landing	a11	a12	12	a13	a12	a14	14	a16
Dutch Slough	a38	a30	32	a26	a23	a22	a23	a18
Mossdale Bridge								

* Samples taken at four-day intervals approximately one and one-half hours after high high tide.
a Taken after low high tide.
b Taken on following day.
c Taken two days later.
d Taken over one hour off scheduled time.
e Taken on preceding day.
f Taken two days earlier.

TABLE -D-7

SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS*
In parts of chloride per million parts of water

Station	June 1965							
	2	6	10	14	18	22	26	30
				Suisun Bay				
Crockett	7290	e7330	7220	7650	7000	d9210	9680	11300
Martinez	a5440		a3980	a3830	4810	e6950	3410	d10200
Port Chicago	3400	a1040			1650	e3370		d4840
Middle Point	3160	a521	744	1610	885	e2540		6160
Pittsburg	abd44	a41	a24		bd31	ad35	a95	a200
				Sacramento River Delta				
Collinsville	74	de20	a12	26	16	a21	a18	736
Emmaton	17	a12	a15		15	a14	a14	a41
Threemile Slough Bridge	10	a9	a9	9	10	a10	a14	15
Rio Vista Bridge	8	9	9	8	8	9	9	10
Isleton Bridge	7	8	6	6	8	8	8	8
				San Joaquin River Delta				
Antioch	27	a23	a17	20	22	a25	aed29	72
Antioch Bridge	25	a30		d30	22	a30	a28	a32
Jersey Island	18	a15	a17	16	17	a17		34
Threemile Slough		a11			15	a16	a13	a13
False River	15	a13	a13	14	14	a18	ad15	28
San Andreas Landing	12	a8	a11	14	10	a9	a14	12
Dutch Slough	d22	a18	a20	17	20	a21	a23	21
Mossdale Bridge		bd25	21	18	bd56	67	39	53

Station	July 1965							
	2	6	10	14	18	22	26	30
				Suisun Bay				
Crockett	9600	e10700	13000	10900	7890	e9660	12800	12800
Martinez	d8520	e9420	7930	a6780	7870	e9070	11200	9960
Port Chicago	5030	e4020		5460		e6490	9710	7520
Middle Point	4460	e3360	5410	5310	4170		3510	6770
Pittsburg		a434	a331			a437	a775	
				Sacramento River Delta				
Collinsville	469	a272	a279	a528	765	a344	a1080	1700
Emmaton	58	a49	a29	151	d25	abd80	a74	bd276
Threemile Slough Bridge	20	a15	a21	40		a17	a84	143
Rio Vista Bridge	11	9	11	9	8	10	12	26
Isleton Bridge	9	8	7	6	7	7	9	8
				San Joaquin River Delta				
Antioch	184	a101	a116	a221	275	a198	a310	920
Antioch Bridge	25	a29	a41	a53	68	a87	a184	a166
Jersey Island		a17	a21	82	61	a28	a46	154
Threemile Slough	14	a14	a12			ad20	a60	47
False River	23	a15	a18	25	28	d18	a37	174
San Andreas Landing	9	a9	a11	11	9	a11	a11	12
Dutch Slough	22	a20	a20	21	34	a31	a47	36
Mossdale Bridge		84	100	93	bd150	a170	160	154

* Samples taken at four-day intervals approximately one and one-half hours after high high tide.
a Taken after low high tide.
b Taken on following day.
c Taken two days later.
d Taken over one hour off scheduled time.
e Taken on preceding day.
f Taken two days earlier.

TABLE -D-7

SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS*
In parts of chloride per million parts of water

Station	April 1965							
	2	6	10	14	18	22	26	30
				Suisun Bay				
Crockett	8480	7310	6170	3340	3610	1740	3460	4430
Martinez	a3820	a3240	3150	a2260	a574	260	a1440	544
Port Chicago	1970	1720	1230	57	29			
Middle Point		955	472	22	31	19	14	a11
Pittsburg			d23	a31		22	a13	a13
				Sacramento River Delta				
Collinsville	a14	15	20	a22	a7	4	a5	ad10
Emmaton	a11	bd12	11	a8	110	9	a7	a8
Threemile Slough Bridge	a9	8	8			6	a4	a6
Rio Vista Bridge	7	6	6	7	5	6	5	4
Isleton Bridge		4	8	5	4	4	6	4
				San Joaquin River Delta				
Antioch	a24	21	21	a25	a30		a18	a14
Antioch Bridge	a27	a35	32	a35	42	38	a24	a37
Jersey Island	ad21	19	19	abd31	a40	25	a16	a14
Threemile Slough	a14	16	17	a22			a12	a13
False River			17	a26	30	19	a15	14
San Andreas Landing	a10	16	13	a25	17	5	a5	a13
Dutch Slough	d40	36	36	d48	46	37	ad26	28
Mossdale Bridge		37		14			cd18	

Station	May 1965							
	2	6	10	14	18	22	26	30
				Suisun Bay				
Crockett	3850	2880	5790	7170	4750	4910	6080	9050
Martinez		a632	a3390	5060	a2720	a3240		
Port Chicago		a19	1220	1940	1400		2790	
Middle Point	12	17	d51	1480		45		
Pittsburg			a12			a13		
				Sacramento River Delta				
Collinsville	7	11		a45	a14	a9		a10
Emmaton	a6	9	a11	a7	a7	a8	bd7	a9
Threemile Slough Bridge	a7	7	a7	a6	d7	a7	a10	
Rio Vista Bridge	4	5	6	5	6	b8	8	9
Isleton Bridge	12	6	5	4	5	b5	6	6
				San Joaquin River Delta				
Antioch	14	13	a16	16	16	a12	a17	a17
Antioch Bridge	a30	33	a21	24	20	a22	a27	a27
Jersey Island	16	14		17	14	a14	a13	
Threemile Slough	a11		a16	a14		a13	a12	a12
False River	14	14	a12	12	11	a12	a12	a12
San Andreas Landing	a13	6	9	a14	12	d11	a11	a16
Dutch Slough	a23	18	a21	23	20	a27	a21	a20
Mossdale Bridge		bd31	a26		63	b40	42	69

* Samples taken at four-day intervals approximately one and one-half hours after high high tide.

a Taken after low high tide.
b Taken on following day.
c Taken two days later.
d Taken over one hour off scheduled time.
e Taken on preceding day.
f Taken two days earlier.

TABLE -D7

SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS*
In parts of chloride per million parts of water

Station	February 1965							
	2	6	10	14	18	22	26	
				Suisun Bay				
Crockett	4060	2720	3570	5890	2790	4310	7310	
Martinez	1810	1830	ae210	a194	a2060	3800		
Port Chicago	27	26	485	792	38	619	d1230	
Middle Point		d22	19	84	26	26	a136	
Pittsburg		20	35	27		26		
				Sacramento River Delta				
Collinsville	7	8	9	11	a20	12	16	
Emmaton	8	5	9	8	9	bd9	9	
Threemile Slough Bridge	6	7	6	9	9	8	12	
Rio Vista Bridge	5	5	9	6	9	6	8	
Isleton Bridge	3	3	4	5	4	3	4	
				San Joaquin River Delta				
Antioch	27	27	28	22	31	27	22	
Antioch Bridge	52	39	38	41	a46	39	33	
Jersey Island	a30	26	32		27	32		
Threemile Slough	16		18	22	20		18	
San Andreas Landing	14	14	5	18	18	18	19	
Dutch Slough	a61	58	58	54	48	50	48	
Mossdale Bridge	a34		24	42				

Station	March 1965							
	2	6	10	14	18	22	26	30
				Suisun Bay				
Crockett	6250	5210	6360	7020	5670	6290	5920	7160
Martinez			4440	7410	4060	4920	ae4530	a4920
Port Chicago		a408	1280	df1580	246	1840	1880	1780
Middle Point	903	a68	1010	822	236	1580	1240	a1720
Pittsburg		d24	bd21	26		d26	25	bd38
				Sacramento River Delta				
Collinsville	14	12	16	14		25	20	17
Emmaton	9	a9	13	14	14	15	15	11
Threemile Slough Bridge	ad8	9	10	10	11	11	9	8
Rio Vista Bridge	9	8	8	9	8	8	8	10
Isleton Bridge	4	7	4	5	6	5	6	6
				San Jooquin River Delta				
Antioch	28	a26	24	23	28	26	24	23
Antioch Bridge	34	32	35	37	a46	31	31	32
Jersey Island	27	abd23	28	ad26	a26		23	ad23
Threemile Slough	22	20	21	22	a19		19	15
San Andreas Landing	20	a20	11	20	a14	12	16	12
Dutch Slough	a46	44	43	46	48	45	46	41
Mossdale Bridge	a44		d21		34	64		a70

* Samples taken at four-day intervals approximately one and one-half hours after high high tide.
a Taken after low high tide.
b Taken on following day.
c Taken two days later.
d Taken over one hour off scheduled time.
e Taken on preceding day.
f Taken two days earlier.

TABLE -D-7

SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS*
In parts of chloride per million parts of water

Station	December 1964							
	2	6	10	14	18	22	26	30
				Suisun Bay				
Crockett	9720	8100	8000	9300	11700	10700	23	55
Martinez	8300	2840	a4090	ae5200	7600	8770	27	18
Port Chicago	5280	2740	ed3170	5290	6710	d6000	bd25	18
Middle Point	a2150	1130		4260	a3360	4870	8	a15
Pittsburg		113			ed319	394		
				Sacramento River Delta				
Collinsville	332	a24	35				4	4
Emmaton	bd45	23	24	24	50	a58	1	
Threemile Slough Bridge	20	17	17	16	20	a15		
Rio Vista Bridge	8	9	10	10	9	7	1	4
Isleton Bridge	7	6	8	8	8	3	1	1
				San Joaquin River Delta				
Antioch	114	65	53	46	200	370	11	31
Antioch Bridge	49	a47	48	54	56	a60	40	43
Jersey Island								
Threemile Slough	29	27	d26	25		a25		6
San Andreas Landing	25	28	24	18	22		18	16
Dutch Slough	51	67	66	68	62	a56	62	65
Mossdale Bridge								

Station	January 1965							
	2	6	10	14	18	22	26	30
				Suisun Bay				
Crockett	1060	74	42	2280		2080	2130	3160
Martinez		15	20	1320	1560	168	854	1830
Port Chicago		21	15	20		30	24	29
Middle Point	21	11		a21	21	26	23	18
Pittsburg	28	d24	21	fd21	d20	d23	ad24	25
				Sacramento River Delta				
Collinsville	9	a4	5	8	7	10	10	6
Emmaton	5	a8	4	5	10	bd9	14	9
Threemile Slough Bridge		a4	3	13	6	9	6	4
Rio Vista Bridge	4	7	4	4	7	9	7	4
Isleton Bridge	3	3	2	1	2	5	4	3
				San Joaquin River Delta				
Antioch	26	18	20	25	20	24	32	27
Antioch Bridge	50	a50	41	34	29	28	34	47
Jersey Island						28		35
Threemile Slough		a12	6	16	14	15		18
San Andreas Landing	8	16	4	9	12	13	5	12
Dutch Slough	44	a37	41	37	a36	42	52	60
Mossdale Bridge							30	30

* Samples taken at four-day intervals approximately one and one-half hours after high high tide.
a Taken after low high tide.
b Taken on following day.
c Taken two days later.
d Taken over one hour off scheduled time.
e Taken on preceding day.
f Taken two days earlier.

TABLE - D-7

SALINITY OBSERVATIONS AT BAY AND DELTA STATIONS*
In parts of chloride per million parts of water

Station	October 1964							
	2	6	10	14	18	22	26	30
				Suisun Bay				
Crockett	10700	11400	10600	10000	11700		12400	10600
Martinez	a6850	a8330	a8690	a7820	8350			
Port Chicago	6090	5440	5130	4610		7650	7530	ae5190
Middle Point	a3850	4600	5170	3920	a9840	6430	6540	
Pittsburg			418	a354	d450		823	
				Sacramento River Delta				
Collinsville	a309	595	a314	a442	520	2080	a726	920
Emmaton	a78	60	a66	a37	84	246	218	92
Threemile Slough Bridge	a23	22	a18	a21	20	103	a49	32
Rio Vista Bridge		11	10	b8	9	12	8	10
Isleton Bridge	7	5	7	b6	6	7	6	7
				San Joaquin River Delta				
Antioch	a183	256	259	a160	165	744	a225	
Antioch Bridge	a62	57	56	a61	50	44	74	57
Jersey Island	a37	a48	a36		36			d39
Threemile Slough	a18	18	a15	a17		20	a20	d27
San Andreas Landing	a9	14	a14	a14	19	18	a18	11
Dutch Slough	a49	43	35	a36	35	a32	a33	38
Mossdale Bridge								

Station	November 1964							
	2	6	10	14	18	22	26	30
				Suisun Bay				
Crockett	11700	10200	10200	7040	10200	8560	9700	8320
Martinez				5630	7480	8140	7100	7480
Port Chicago	4890	5380	5120	a784	4510	3390	4370	4060
Middle Point				1190	3280	3920	3000	3240
Pittsburg			a413		65			d113
				Sacramento River Delta				
Collinsville	716	567	a600	28		a38	50	48
Emmaton	116	88	a99	bd17	22	27	33	35
Threemile Slough Bridge	23	a19	a24	8	13	a18	19	20
Rio Vista Bridge	11	13	7	8	12	12	10	10
Isleton Bridge	7			6	8	9	9	6
				San Joaquin River Delta				
Antioch	397	268	a351	78	49	79	70	80
Antioch Bridge	43	a43	a47	40	41	a44	49	49
Jersey Island	46	a45	a36		31	a31		32
Threemile Slough	20	21	a24		27			29
San Andreas Landing	17	27	a24	28	23	29	24	24
Dutch Slough	39	a40	a41	42	45	48	d53	d59
Mossdale Bridge								

* Samples taken at four-day intervals approximately one and one-half hours after high high tide.
a Taken after low high tide.
b Taken on following day.
c Taken two days later
d Taken over one hour off scheduled time.
e Taken on preceding day.
f Taken two days earlier.

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
(IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1956		Feather River at Sutter Butte Canal Company Intake nr Gridley

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1																					71.5	68	72	69	1
2																					70.5	67	71	68.5	2
3																					70.5	67	69.5	66.5	3
4																					69	64.5	69	66	4
5																					69	64	69	65	5
6																					69.5	64.5	69	66	6
7																					70.5	65.5	68	66	7
8																					72	66	69.5	65	8
9																					72.5	67.5	69	65	9
10																					73.5	68.5	68	65.5	10
11																					73	69	67.5	64	11
12																					71	67	67	63	12
13																					72	67	68	63	13
14																			69.5	66	72	67.5	69.5	66	14
15																			70	66	72	67	69.5	66.5	15
16																			71	66.5	71	67	67	64.5	16
17																			72	67.5	71	67	66	63	17
18																			73	69	70.5	67	65.5	63.5	18
19																			74	70	70	67	66.5	63.5	19
20																			75	71	70.5	67	68	65.5	20
21																			76.5	71	71	67	69	66	21
22																			77	72	71	68	68	65	22
23																			77.5	72.5	71	67.5	66	63	23
24																			76.5	72.5	70	67	65	62	24
25																			76	72.5	70	67	64.5	61	25
26																			75	71	70	67	65	64	26
27																			74.5	70	70	66	65.5	63	27
28																			73.5	69.5	69.5	65.5	64	63	28
29																			72.5	69	69.5	66	67	63	29
30																			72.5	69	71	67	67	64	30
31																			72.5	68	72.5	69			31
AVG.																			73	72	71	67	68	65	AVG.
MAX.																			77.5		73.5		72		MAX.
MIN.																			66		64		61		MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
77.5	7	23	61	9	25

LOCATION			MAXIMUM TEMPERATURE OF RECORD		MINIMUM TEMPERATURE OF RECORD		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.		DATE		DATE	FROM	TO
		SE 33 19N 3E	77.5	7/23/56	61	9/25/56	7/13/56	Present

Station located on headwall of inlet structure to Sutter Butte Canal.

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
(IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1957		Feather River at Sutter Butte Canal Company Intake nr Gridley

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1	67	63	49	49	49.5	46.5	44	40.5	39.5	38.5	*	*	53.5	52	59	58	65	63	74	71	72	71	71	67.5	1
2	65.5	63	51	48.5	48.5	46	42	40.5	42	39	*	*	54.5	52	56.5	56	66	63	74	70	70	67	69	68	2
3	64	62	51	49	48	45	42	40	41	39	*	*	NR	NR	56.5	54	66	64	74.5	70	69	66.5	68.5	66	3
4	66	61	50.5	49	46.5	46	40.5	39.5	41.5	39	*	*	NR	NR	58	55.5	66	64	75	70.5	68.5	64.5	69	66	4
5	65.5	63	51.5	48.5	46.5	45.5	42	40	43	40	*	*	NR	NR	60.5	58	67	64	75.5	71	69	65	70.5	67.5	5
6	NR	NR	52	49	45	44	44	41	41.5	41	*	*	NR	NR	61	59.5	67	64.5	75	71.5	69.5	66	71	68	6
7	NR	NR	52	49	45	43	NR	NR	42	41.5	*	*	NR	NR	60	59	67	64.5	75	71	70	66.5	72	68	7
8	NR	NR	51	48.5	44.5	42	NR	NR	45	43	*	*	51.5	NR	57.5	57	67	64	75.5	71.5	71	67	72	68.5	8
9	64	NR	52	49	44	41.5	NR	NR	44	43	*	*	52	50	57.5	56	65	64	76	72	71.5	67	72	68	9
10	62	61	52	49.5	42.5	41.5	NR	NR	46	44	*	*	53	51	56.5	54.5	66	63	75.5	72.5	72	68.5	71	68	10
11	62	60	52	49	43	41	40	38.5	47/5	44	*	*	53	51.5	57	55	66	64	76	72	73	68	71	67.5	11
12	61.5	59	51	48	42.5	41	42.5	40	48	46.5	*	*	54.5	52	56	54	67	64.5	76	73	71	69	70.5	68	12
13	61	58	51	48	43	41	42	41	48.5	46.5	52.5	51	54	53	56	54	67.5	64.5	74.5	71.5	70	68	71	67.5	13
14	60.5	57	49	47.5	44	42	43.5	41	48.5	47	52.5	50	55	53.5	56	54	66.5	64	75	71	70	67	70.5	67.5	14
15	NR	NR	54	48.5	44	42	44	42.5	50	47	53.5	50	53	51	57	54	66	63	75	71.5	69	66	70	67	15
16	NR	NR	54	51.5	44	42	44	42	49	47	51.5	50	52.5	51	59	55	66	62.5	76	72	69	65.5	69.5	66.5	16
17	61.5	57.5	53.5	51	43	42	43	41.5	NR	NR	50	48.5	51.5	50	59	57	67.5	63	75.5	71.5	69	65.5	68.5	66	17
18	62	58.5	53	50.5	44.5	42	43.5	41.5	NR	NR	50.5	48.5	51	49	57	52.5	68.5	64	74	71	67.5	65.5	69	65.5	18
19	61	58	52	50	42.5	42	42	40	NR	NR	52	50	51	50.5	52.5	50	69	65	74.5	71	68	64	68	65.5	19
20	59	56.5	52	49	42	41	40.5	40	48	46	57	51.5	51	49.5	50	50	71	65.5	74	71	68.5	65	68.5	65	20
21	58.5	55.5	51.5	49	42.5	40.5	42	40	*	*	55	53	51.5	49	53	50	71	67	73.5	70	69	65.5	68	64.5	21
22	59	55	51	48	42.5	40	42	40.5	*	*	54	51	52.5	51	55	53	71	67	74	70	70	66	68.5	64	22
23	60	57	51	47.5	41.5	40	42	41	*	*	52.5	50	54	52	56	54	72.5	67.5	74.5	70	71.5	67.5	69	64.5	23
24	57.5	55	50	47.5	41.5	39	41.5	41	*	*	53.	50.5	55	53	57.5	55	74	69	75	71	72	69	69	65	24
25	56	53.5	50.5	47	42.5	39.5	43.5	41	*	*	55.5	52	55	53	59	57	74.5	70	75.5	71	71	69	68	65	25
26	54.5	53.5	50	46.5	43	39.5	42	40.5	*	*	58	55	55.5	53	61	59	75	70	74.5	71.5	71.5	69	66.5	64.5	26
27	54.5	52	49	46	43	39.5	42	40	*	*	57	55	57	53.5	62	60.5	75.5	71	74.5	71	71	67.5	66.5	65	27
28	53.5	51	49	45.5	43	40	42.5	40.5	*	*	58	55.5	58	54.5	62	61	76.5	72	74.5	71	70	67.5	66	64	28
29	51.5	50	48.5	46	42.5	39.5	42.5	40.5			56.5	55	60.5	NR	62	60	76	72	74	70.5	69.5	67	64	62.5	29
30	50	50	49.5	46	41.5	39.5	41.5	39.0			55	53	61	59	63	61	75.5	72	74.5	71	69	66	65	62	30
31	50.5	49			43.5	41	41	38			54.5	53			65	62			73	70	70 .	67			31
AVG.	60	57	51	48	44	42	42	40					54	52	58	56	69	66	75	71	70	67	69	66	AVG.
MAX.	67		54		49.5		44						61		65		76.5		76		73		72		MAX.
MIN.	49		45.5		39		38						49		50		62.5		70		64		62		MIN.

*Record incomplete.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
76.5	6	28	38	1	31

LOCATION			MAXIMUM TEMPERATURE OF RECORD		MINIMUM TEMPERATURE OF RECORD		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.		DATE		DATE	FROM	TO
		SE 33 19N 3E	77.5	7/23/56	38	1/31/57	7/13/56	Present

Station located on headwall of inlet structure to Sutter Butte Canal.

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
(IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1958		Feather River at Sutter Butte Canal Company Intake nr Gridley

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1	65.5	63	57	55	45	44	44	43	46	45.5	47	46	NR	NR	54	51.5	61	60	68	66	77	74	75	72	1
2	65	62.5	55.5	53.5	44.5	43.5	44	43.5	46.5	45	46	45	47	45	54.5	52.5	60.5	59	68.5	66	76	73	75	72	2
3	63.5	62	53.5	52	44	43	45	44	47	45.5	46	45	47	46	54	53	59	57.5	69.5	66.5	76	73	74	71.5	3
4	62.5	61	53	51	44	42.5	44.5	44	46	46	46.5	45.5	48	47	54	53	59	56.5	71	68	77	74	73	71	4
5	61	59.5	52	50	44	42.5	45	43	45.5	45	46.5	46	49.5	49	54.5	53	62	59	72	69.5	77.5	74	73	70	5
6	59	58	51.5	49.5	44	43.5	43	43	46	45.5	47.5	46.5	50.5	50	55	54	62	60	73	70	78	74	73	69	6
7	58.5	56	50.5	49	44.5	43.5	43.5	43	48	46	48	46	53	51.5	54.5	53	62	60	73.5	71	76	73.5	71	70	7
8	58	56.5	52	50	44.5	44	42.5	42	48	47	46.5	46	52.5	50.5	57	54	60	59.5	74	70.5	75	73	74	70	8
9	58.5	57	51	50	44	44	42.5	42	47	46.5	46	45	54	53	59	56	62	59	74	71	75.5	72	75	72	9
10	58.5	57.5	51	50	44	44	44	42.5	47	46.5	45.5	45	55	54	59	55	63	71	74	71	76	73	74	71	10
11	60.5	58	51	50	44	43.5	45	44	47	46.5	45.5	45	56	55	56.5	55	62	60.5	75	71	77	73	72	70.5	11
12	59	58	50	49.5	43.5	43.5	45	44.5	59	47	46.5	45	55.5	55	55	54	59.5	58	75	71	77	74	72	69	12
13	58	57.5	51	50	44	43.5	45	44	47	46.5	46	45	55	54	56	53	58	55.5	73.5	71.5	78	74.5	71	69	13
14	58	57	51.5	50	44	43.5	44	44	47	46.5	46	45	54	54	58	55	62	57	74	71	78	75	71	68	14
15	59	57	49	47.5	44	43	43.5	43	48	47	45	45	54	53.5	60	57	64	61	74	71	78	75	71	68	15
16	59	57.5	48.5	47	47	44	43.5	43	48	48	45.5	45	54	53.5	61	59	65	62	72.5	71	76.5	75	71.5	68.5	16
17	59.5	57.5	47	46	48	46.5	44.5	43.5	48	48	46	45	54	53.5	61	60	65.5	63	73.5	70	77	74	71	68.5	17
18	59	58	46.5	46	47	46.5	45	44	48	48	47	46	54	53	60	49	66	64	74	71	77	74	72	69	18
19	59	58	47.5	47	46	45	44	43	48	47	47.5	46.5	54	54	60	59	65.5	63.5	73	71	76	74	72.5	69	19
20	58	56.5	48	47	46	45	43	42.5	47.5	47	50	47.5	54	53.5	60	59.5	66	64	73.5	70.5	76	73	71.5	69	20
21	57	56	48.5	47.5	48	46	43	43	49	47.5	49	48	55	54	60	59	67	65	75	71	77	74	71	68	21
22	57	56	48.5	47.5	46.5	44	43	42.5	50	49	48	46.5	54	52	60	58	68	65.5	76	72	77.5	75	69	68	22
23	56.5	55.5	48	47	44	42.5	42.5	42	49.5	49	47	46.5	52.5	51	58.5	57.5	69	66	76	73	77	75	69.5	67	23
24	56	55	47	46	43	42	43.5	42.5	52	48	47.5	46.5	51	49	59	57	68	67	76	73	77	74	68.5	65.5	24
25	57.5	56	46	45.5	42.5	42	45.5	43	48	46	NR	47.5	52	49.5	60.5	58	68	66	77.5	74	77	74	68	65	25
26	60	57	46	45.5	43	42.5	47	45	47	46.5	NR	NR	53	51	61	59	69	67	78	74	77	74	69	65.5	26
27	59	57.5	46.5	45.5	44	43	47	47	47.5	47	NR	NR	52	50.5	60.5	58	70	67.5	78	74	76	74	69	66	27
28	58.5	46.5	46	45.5	44.5	44	48	46.5	47.5	46.5	NR	NR	53	50.5	61	59	69.5	67	77	75	76.5	73.5	69	66	28
29	58	55.5	46	45.5	45	44	48	47			NR	NR	54	51.5	62	59	68	66	77	74	76	73.5	69	67	29
30	56.5	55	46	45	45	44.5	47.5	46			NR	NR	53	51.5	62	60	68.5	66	78	74	75	73	70	67	30
31	56.5	54.5			44.5	43.5	46	46			NR	NR			62	60			76.5	74	75	72			31
AVG.	59	58	50	48	45	44	45	44	48	47	47	46	53	52	58	56	64	62	74	71	77	74	71	69	AVG.
MAX.	65.5		57		48		48		52		50		56		62		70		78		78		75		MAX.
MIN.	54.5		42.5		42		42		45		45		45		51.5		55.5		66		72		65.5		MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
78	7	27	42	1	23

LOCATION			MAXIMUM TEMPERATURE OF RECORD		MINIMUM TEMPERATURE OF RECORD		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.		DATE		DATE	FROM	TO
		SE 33 19N 3E	78	7/27/58	38	1/31/57	7/13/56	Present

Station located on headwall of inlet structure to Sutter Butte Canal.

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
(IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1959		Feather River at Sutter Butte Canal Company Intake nr Gridley

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1	70	67	59.5	58	49	49	46	45	45	43	48	47	54.5	51.5	62	60	71	66.5	78.5	76	84	81.5	71.5	68	1
2	71	67	59	57	49.5	49	46	45	44	43	49	48	56.5	54.5	60	58	72	67.5	79	75.5	83	80	72	68.5	2
3	69	67	59	56.5	50	49	45	43	44	43	49.5	48.5	58	55.5	58	56	72.5	68.5	79	75	83	79.5	71	67.5	3
4	68.5	67	59	57	50.5	49.5	43	42	44	43	49	48	58	56	58	55	74	69.5	78.5	75	83	80	72	68.5	4
5	68	66	59	57.5	51	50	43	42	44	43	49	48	59	56	59.5	56	74.5	71	78	75	82.5	79.5	72	69	5
6	67.5	65	60	58	50	49	44	43	46	44	49	48.5	59	57	62	57.5	74	72	78	75	83	79	72	69	6
7	69	66	60	58	49	48	45	43.5	46	45	49	48.5	58	56	63.5	60	73.5	71	78	75	84	81	72.5	69	7
8	68	65.5	59	58	47	47	46.5	44	45	44	49	48	57	55	65	61	74	70.5	78	75	86	82	72	69	8
9	68	65	59	58	47	47	46.5	45	44	44	49	48	57.5	55	64	62	73	70	78.5	75	86.5	83	73	70	9
10	68.5	65.5	58	57.5	48	47	47	46	44	44	49.5	48.5	58	55	65	62	74	70	78	76	87.5	83.5	73	70	10
11	69	65.5	57.5	57	48.5	47.5	46	46	44	43	49.5	48.5	59	56	66.5	63	75	70	78	76	86	83	73	70	11
12	67.5	64.5	56	55.5	50	49	48	46	44	43	50.5	48.5	58	56	68	64	76	72	80	76	83.5	82	72.5	70	12
13	68	65	56	55	49	49	47.5	47	44	43	52	50	58.5	56	67.5	65	76	72	80	77	83.5	80.5	70	68.5	13
14	67	65	56	54	49	48.5	47	46.5	44.5	43	52	51	59	56	67	65	74	71.5	81	77	84	80	68.5	67	14
15	67.5	65	54	52	49	48	46.5	46	44	42.5	52	51	58.5	56	66	63.5	75	71	81.5	78	84	81	69	67	15
16	67.5	65	52	51	49	48	46.5	46.5	46	43	52.5	51	59	55.5	64	62.5	75	71	83	79	83.5	80.5	68.5	66	16
17	67	65	51	50	48.5	48	46.5	46	45	44	53.5	51	59	56.5	64	61	75	72	82.5	79	84	81	66.5	65	17
18	67.5	64.5	50	49	48.5	47.5	46	45.5	45	44.5	54.5	51.5	58.5	56	64	61	77	73	82	79	83	80	65	63.5	18
19	65.5	64.5	50	49	48	47.5	45	44	45	44.5	53.5	51.5	58.5	56	65	62	78	74.5	82	79	82	79	65	63	19
20	63.5	61.5	50	49	48	47.5	44	43	46	45	54.5	51.5	59	56	66	62.5	79.5	76	82.5	79	81	78	64.5	62	20
21	63	60.5	51	50	48	47	43	43	45.5	45	53	52	60	57	67	63	81	77	82	79	81.5	78	65	61	21
22	62	59.5	51	50	48	47	45	43	46	45	52	51.5	61	58	66	65	81.5	78	83	80	80	77	66	62	22
23	61	59.5	50.5	50	49.5	48	45	43.5	46	45	52	51	61.5	58.5	65	64	82	79	84	80.5	79	76	66	63	23
24	62	59	51	50	51	49.5	45.5	43.5	46	46	52	50	63	60	65	62	82	79	85	80	77	75	67	63	24
25	61	60	51	51	51	49	45.5	43.5	46.5	46	50.5	50	61	60	65.5	62	79	77.5	84	82	77.5	74	67	64	25
26	61	59	51	51	50	49	46	45	47	46	52.5	50	61	59	66	63.5	80	77	82	80	76	73	67.5	64	26
27	61.5	59	52	51	49	47.5	47.5	46	48	47	52.5	50.5	58.5	56.5	67	64	79	76	81	78	74	70	66	63	27
28	61.5	59	52	51	48	47	47	46.5	48	47	52	51	60	57	67.5	64.5	78	76	82	78	73	69	65	62	28
29	61	59	51.5	50.5	47	46	47	46			52	50.5	61.5	58.5	68	65	78	75	82	79	72	69	64	61	29
30	60.5	59	50	49	47	46	46	45			53	51	62	61	69	66	79	75	83.5	79	72.5	69	63.5	61	30
31	60	59			46.5	46	45	44			52.5	50			70	66			84.5	80.5	71.5	68			31
AVG.	66	63	55	53	49	48	46	45	45	44	51	50	59	56	65	62	76	73	81	78	81	78	69	66	AVG.
MAX.	71		60		51		48		48		54.5		63		70		82		85		87.5		73		MAX.
MIN.	59		49		46		42		42.5		47		51.5		55		66.5		75		68		61		MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
87.5	8	10	42	1	3

LOCATION			MAXIMUM TEMPERATURE OF RECORD		MINIMUM TEMPERATURE OF RECORD		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.		DATE		DATE	FROM	TO
		SE 33 19N 3E	87.5	8/10/59	38	1/31/57	7/13/56	Present

Station located on headwall of inlet structure to Sutter Butte Canal.

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
(IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1960		Feather River at Sutter Butte Canal Company Intake nr Gridley

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1	63	60	54.5	53	46	45.5	41	40	48	46	46	45	50	47	54	53	66	62	NR	NR	NR	NR	71	NR	1
2	63	60	54.5	52	46	45	40	30	47	45	45	44 5	51.5	49	55	52	67	63.5	NR	NR	NR	NR	70.5	67.5	2
3	62.5	60	54	52.5	46	45.5	39	38	45	43	46.5	44	53.5	51	55	53	68	64.5	NR	NR	NR	NR	71	69	3
4	62	59	54	52	46.5	45.5	39	38	44	42.5	47	45	54.5	52	55	52	68.5	65	NR	NR	NR	NR	70	67	4
5	61.5	59	54	51.5	46	45	39	38	45	44	47	45.5	54.5	53	55	52	68.5	65.5	NR	NR	NR	NR	70	67	5
6	61	58.5	54	52	45	44	38	38	47	45	46	45	54	52.5	56.5	53	69	66	NR	NR	NR	NR	70	67	6
7	61	58	53	51	44.5	43.5	39	38	48	47	47	45	54.5	52.5	58.5	55.5	68	65	NR	NR	NR	NR	70	67	7
8	61	59	52	40	43.5	43	NR	NR	48	45	47	46	54	52	59	56.5	68	64.5	NR	NR	NR	NR	70	67	8
9	63	60	51.5	49	43	42.5	NR	NR	46	45	47	46	54.5	52.5	59	56.5	68.5	65	NR	NR	NR	NR	68.5	67.5	9
10	63	60	51	49	43	42	NR	NR	46	45	47	46	53.5	52	59.5	57	69	65.5	NR	NR	NR	NR	71	67	10
11	63	60	51	49	43	42	NR	NR	46	45	47	46.5	53	51.5	60	57	70.5	66.5	NR	NR	NR	NR	72	68.5	11
12	63	60	51	48.5	42.5	42	NR	NR	46	45.5	47	47	51.5	50	59.5	58	71.5	67.5	NR	NR	NR	NR	72	69	12
13	62	59	51	49	42.5	42	NR	NR	46.5	46	47	47	52.5	49.5	58.5	56	72	68.5	NR	NR	NR	NR	71.5	68.5	13
14	61.5	59	50	49	42.5	41.5	41.5	41	46	45	48	47	54	51	58.5	56	72.5	69.5	NR	NR	NR	NR	71	68	14
15	62	59	49.5	48	42.5	42	41.5	41	45	44.5	47	47	53	51	59	56	73	69.5	NR	NR	NR	NR	71	67	15
16	62	59.5	48	47	42	41.5	42	40.5	46	44.5	47	46	53	50	60	57	73.5	70	NR	NR	NR	NR	69	67	16
17	61	59	48.5	48	41.5	41	41	40	45.5	44	47.5	46	53.5	50.5	59.5	57	73.5	70	NR	NR	NR	NR	69.5	67	17
18	60	59	48	47.5	42	41	40	39.5	45.5	44	49	47.5	53	51.5	58.5	56.5	73	70	NR	NR	NR	NR	69.5	66	18
19	NR	NR	48	47	43	41.5	41	39	45	44	51	49	54.5	51.5	59	56	72.5	69.5	NR	NR	NR	NR	68.5	66.5	19
20	NR	NR	48.5	48	41.5	41	40.5	39	45	44	51	50.5	55	52	58.5	57	71	69	NR	NR	NR	NR	68	66	20
21	NR	NR	49	48	41.5	41	41	40	44.5	44	53	51	55	53	58	56	71.5	68	NR	NR	NR	NR	66.5	65	21
22	NR	NR	48	47.5	42	41	41.5	41	44.5	43.5	53	51.5	53.5	52	57	55	71	68	NR	NR	NR	NR	66	64	22
23	62	NR	49	47.5	42	41	43.5	41.5	44.5	44	52.5	50.5	51.5	49	55	52	72	68	NR	NR	NR	NR	66.5	63	23
24	62	60	48.5	48	43	42	43.5	43	44	43	52.5	51	49.5	47.5	53	51	72.5	69	NR	NR	NR	NR	67	63.5	24
25	62	60	48.5	47.5	43.5	42.5	45	43.5	45	43	53	51	48.5	46.5	52	50	72	69	NR	NR	NR	NR	67	63.5	25
26	61	60	48.5	47.5	43	43	46	45	44	43	53	52	49	47	53	49.5	72	69	NR	NR	NR	NR	67	63.5	26
27	60	59	49	48	43	42	46	44	45	44	52	51	50	48	56.5	52	72	69	NR	NR	NR	NR	67	63.5	27
28	59	57.5	48.5	47	42.5	41.5	44.5	44	45	44	49	47.5	50.5	48	59.5	55.5	NR	NR	NR	NR	NR	NR	66	64	28
29	58	56.5	47	46.5	42.5	41	46	45	45.5	44.5	48	46.5	52.5	48.5	61	57.5	NR	NR	NR	NR	NR	NR	66	63.5	29
30	57	55.5	46.5	46	41	40.5	46.5	46			48.5	47.5	55	51	62.5	59	NR	NR	NR	NR	NR	NR	66.5	63	30
31	56	54.5			41	40	46.5	45.5			47	46			64.5	61			NR	NR	NR	NR			31
AVG.	61	59	50	49	43	42	42	41	46	44	49	47	53	50	58	55	71	67					69	66	AVG.
MAX.	63		54.5		46		46.5		48		53		55		64.5		73.5						72		MAX.
MIN.	54.5		46		40		38		42.5		44		46.5		49.5		62						63		MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
			38	1	5

LOCATION			MAXIMUM TEMPERATURE OF RECORD		MINIMUM TEMPERATURE OF RECORD		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.		DATE		DATE	FROM	TO
		SE 33 19N 3E	87.5	8/10/59	38	1/5/60 1/31/57	7/13/56	Present

Station located on headwall of inlet structure to Sutter Butte Canal.

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
(IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1961		Feather River at Sutter Butte Canal Company Intake nr Gridley

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1	66.5	63.5	55.5	53	44	43	40.5	39.5	45.5	45	46	45	52	50.5	53	52	58	55	73.5	69.5	75	71.5	74.5	72	1
2	66	63.5	54	53	45.5	44	40	39	45	45	47.5	46	54	52	54	51	58	55	73.5	70	74.5	71.5	73	70	2
3	66	63	54.5	53	46	44.5	39	38.5	46.5	45	47.5	46.5	56	53.5	54.5	51.5	60.5	56.5	73	70	75.5	72	73	70	3
4	66	63	53	52	45	43	38	37.5	46.5	45.5	47.5	46.5	55	53.5	55	52	63	59	72	69	76.5	73.5	72.5	70	4
5	65	63	53.5	51	43	42.5	37.5	37	46	45.5	47.5	46.5	53.5	51.5	54.5	52	64	60.5	71	68	78	74	72	69	5
6	65	63	54	52	43	41.5	37	37	46	45.5	48	46	52.5	50	53	51.5	64.5	61.5	71.5	68.5	76.5	75	71	69	6
7	65	63	52.5	51	41	41	37.5	36	46.5	45.5	46	45	53	50.5	53	50	66	62	71.5	68.5	77.5	74	70	68	7
8	64	62	52	51	41	39.5	38	37	46	45	46.5	45	52.5	49.5	55	51	65.5	62.5	72	69	78	75	70.5	68	8
9	61.5	59.5	52	51	40.5	39.5	39	38	46	45	46.5	44.5	52.5	50	55	53	66.5	63	73	69	78	75	70	68	9
10	59	58	52	50.5	40	39.5	40	39	47.5	45.5	47	46	53	50	55	53	67.5	63.5	73.5	70	76	74.5	70.5	68	10
11	59	57	52	51	40.5	39.5	40	39	47.5	46.5	49.5	47	53.5	50.5	53	51	67.5	64.5	74.5	71	77	74	70.5	68	11
12	58	56	52.5	52	40	40	41	40	46.5	44.5	47.5	46.5	53	51	52	49.5	68.5	64.5	74.5	71.5	78	74	71	68	12
13	58	55.5	51.5	51	40	40	42	41	45.5	44	48	46.5	51.5	49.5	53	50	69	65	75.5	72	76.5	74	69.5	67	13
14	59	56	51	50	40.5	40	42	42	44	43.5	49	47.5	52.5	49	55	51.5	70	66	76	72.5	76	73	69	66	14
15	58.5	56	50	47.5	40	40	42	41.5	46	44	48.5	47.5	54	50.5	57.5	53.5	71.5	67.5	76	73	75.5	73	70	66	15
16	58	55	47	46.5	41	40.5	41.5	41	45	44	47.5	46.5	55.5	52	58	55	73	69.5	76	73	74.5	72	67.5	67	16
17	57	55	46	45.5	43	41.5	41	40.5	46	44	47	46	55.5	54	58.5	55.5	74	70.5	76	72.5	74	71	68	65	17
18	56.5	54	46	46	44.5	43	40	40	45	44	47.5	47	55	53.5	59.5	56	74	70	76	73	74.5	71	68	65	18
19	57	53.5	46	45.5	44.5	43	39.5	39	44	43	48.5	46.5	53.5	51	61	58	74	70	76	73	73.5	71	68	65	19
20	57.5	54.5	45	44.5	43.5	43	40	39.5	44	43	47.5	46.5	52	50	59	56.5	74	70.5	76	72.5	74.5	70	67	65	20
21	58	55	46	45	43	42.5	40.5	40	45	44	47.5	47	50	48.5	58.5	55	74.5	71	76	72.5	75	72	67	64	21
22	58	55	45.5	44.5	42.5	42	40.5	39.5	45.5	44	48.5	47.5	48.5	47	59	56	74	71	77	73	75	72	68	65	22
23	58	55.5	45	44.5	42.5	42	41	40	45.5	44.5	49	47.5	47.5	45.5	59	56.5	74.5	71	77	73.5	75	72	67.5	65	23
24	57	55	47	45.5	42	41.5	42	41	46	45	49	47.5	47.5	44.5	59	56	75	72	77	74	75.5	72	67	64.5	24
25	57	55	47	46	41.5	41	42	41	46	45	48	47	49	45.5	59.5	56.5	75	72	77	74	74	71	67	64.5	25
26	57	55	46.5	46	41	40.5	42	41	46	45	48.5	46	51	47.5	60.5	57.5	75.5	71.5	76.5	73.5	72.5	71	67	64.5	26
27	56	54	46	44.5	41	40	42.5	42	46	45.5	46.5	45.5	52	49	60	57	74	71.5	77	73.5	72.5	70.5	66	64.5	27
28	57	54	44.5	43	41	40	43	42	46	45	46.5	45.5	53.5	50.5	59.5	57	73.5	70	77	73.5	72	69	66	64.5	28
29	57	55	43	42	40.5	40	43	42.5			47	46	54	52	58	57	72.5	69.5	76	73.5	73.5	70	66.5	64.5	29
30	56	54	43.5	42	41	40	43	42			49	47	54.5	51	58	56.5	72.5	69	75	72	74	71	66	64	30
31	56	53.5			41	40	45	42.5			51	49			57.5	55			75	71.5	74	71			31
AVG.	60	57	49	48	42	41	41	40	46	45	48	46	53	50	57	54	70	66	75	72	75	72	69	67	AVG.
MAX.	66.5		55.5		46		45		47.5		51		56		61		75.5		77		78		74.5		MAX.
MIN.	53.5		42		39.5		36		43		44.5		44.5		49.5		55		68		69		64		MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
78	8		36	1	7

LOCATION			MAXIMUM TEMPERATURE OF RECORD		MINIMUM TEMPERATURE OF RECORD		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.		DATE		DATE	FROM	TO
		SE 33 19N 3E	87.5	8/10/59	36	1/7/61	7/13/56	Present

Station located on headwall of inlet structure to Sutter Butte Canal.

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
(IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1962		Feather River at Sutter Butte Canal Company Intake nr Gridley

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1	65.5	64	52	49.5	47	47	40	40	40	39	40	39	51	49	51	48	60	57	71	67	75	72	74	71	1
2	66	64	51	48.5	47	46	40	40	41	40	41	38	50	49	53	50	61	58	71	68	74	72	74	71	2
3	65	63	50.5	49	46	45	40	40	42	41	43	41	51	49	54	52	60	58	70	67	74	70	74	71	3
4	65	62.5	52	48.5	46	45	41	39	43	42	42	41	51	50	56	54	59	57	71	67	73	69	72	69	4
5	65.5	62	52	50	45	44	41	40	43	42	44	42	52	50	55	54	58	56	73	68	73	70	72	69	5
6	65	62	52	50	44	43	41	40	43	42	44	42	52	50	55	53	59	56	73	68	73	70	72	69	6
7	63.5	61.5	51	49	43	42	41	40	44	42	44	44	50	49	56	53	61	57	74	70	73	69	72	69	7
8	61	59	50	48	43	42	42	41	44	43	45	44	50	48	55	52	62	59	73	70	71	69	72	69	8
9	60.5	59	50.5	47.5	42	40	43	42	46	44	47	45	51	49	52	50	63	60	73	70	72	69	71	69	9
10	60.5	59	49	48	40	39	43	42	46	43	46	44	50	49	51	50	62	60	73	70	72	68	70	68	10
11	60	59	49.5	48	39	38	45	43	43	43	45	43	50	48	52	49	62	59	72	69	73	69	70	68	11
12	61	58.5	49.5	47.5	39	38	45	44	43	43	44	43	52	49	53	50	62	59	72	68	73	70	69	67	12
13	62.5	59.5	49	47	38	38	44	42	45	43	44	43	52	50	54	51	61	58	72	69	74	70	69	66	13
14	63	61.5	49	48	39	38	42	40	45	44	44	42	53	51	54	52	62	59	72	70	74	71	70	67	14
15	63	61.5	48	46	40	39	40	38	45	44	45	43	52	51	54	51	62	59	73	70	73	70	70	67	15
16	63	61.5	46.5	45	40	39	39	38	44	44	46	44	51	50	55	52	63	70	74	70	73	70	69	66	16
17	62.5	61	46	44	40	39	39	38	44	44	47	45	51	50	55	52	66	63	72	70	74	71	69	66	17
18	62	60	45.5	43.5	40	39	39	38	44	44	47	44	52	50	56	53	69	66	72	68	74	71	68	65	18
19	61	60	44.5	43	41	40	40	39	44	44	48	46	51	49	54	52	69	67	72	68	74	71	67	65	19
20	61	59	44.5	42.5	43	41	42	40	44	43	48	47	51	48	54	50	70	67	73	69	74	71	68	64	20
21	59.5	58	44.5	43	44	43	42	40	43	42	48	46	51	49	55	51	69	67	74	71	74	71	68	65	21
22	59	56.5	44	43	44	43	40	38	44	43	47	46	53	50	57	54	70	68	74	71	74	70	68	65	22
23	57.5	55.5	46	43.5	44	43	39	37	45	44	45	44	54	51	57	54	72	68	74	70	74	70	67	64	23
24	56.5	55.5	46	45	43	42	37	36	45	44	45	43	55	52	55	52	72	68	74	71	74	71	67	64	24
25	56	54.5	45	44.5	42	42	36	35	44	42	47	44	55	53	53	50	71	68	74	70	75	72	67	64	25
26	56	54.5	46	44.5	43	42	35	34	42	41	49	46	53	52	53	49	69	66	76	71	74	71	67	64	26
27	56	55	48.5	46	42	41	37	35	41	39	49	47	52	49	56	51	69	66	77	73	74	71	64	62	27
28	55	53	49	48.5	42	42	39	37	40	39	49	47	49	46	57	53	70	67	77	74	70	72	63	62	28
29	54	51.5	49	48	42	41	41	39			49	48	47	45	58	55	70	66	77	74	71	68	65	62	29
30	53	50.5	48.5	47	41	41	42	40			51	49	49	46	59	56	71	67	77	74	72	68	66	62	30
31	52.5	50			41	40	41	39			51	50			59	56			76	73	74	69			31
AVG.	60	58	48	46	42	41	41	39	43	42	46	44	51	49	55	52	65	62	73	70	73	70	69	66	AVG.
MAX.	66		52		47		45		46		51		55		59		72		77		75		74		MAX.
MIN.	50		42.5		38		34		39		38		45		48		56		66		68		62		MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
77	7	28	34	1	26

LOCATION			MAXIMUM TEMPERATURE OF RECORD		MINIMUM TEMPERATURE OF RECORD		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.		DATE		DATE	FROM	TO
		SE 33 19N 3E	87.5	8/10/59	34	1/26/62	7/13/56	Present

Station located on headwall of inlet structure to Sutter Butte Canal.

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
(IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1963		Feather River at Sutter Butte Canal Company Intake nr Gridley

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1	66	62	55	53	45	45	41	40	49	47	49	48	49	NR	54	53	63	61	65	62	71	68	70	66	1
2	66	63	55	54	46	45	40	39	49	48	50	48	48	47	54	52	62	60	65	61	71	68	70	66	2
3	65	62	55	54	47	46	40	39	49	48	50	48	49	47	54	53	61	59	65	62	71	67	71	67	3
4	65	62	55	54	48	47	42	40	50	47	49	48	50	48	53	52	60	58	65	62	61	67	69	67	4
5	64	62	54	54	46	46	43	41	49	48	48	47	52	51	54	52	60	57	66	63	71	67	67	66	5
6	63	61	54	53	46	46	45	43	49	48	48	46	53	50	54	53	60	56	66	63	71	68	70	65	6
7	63	60	53	52	46	45	45	44	50	49	47	46	50	49	54	52	61	57	67	64	71	68	70	66	7
8	64	61	52	51	45	44	44	43	51	50	48	47	49	48	52	49	62	59	67	64	71	68	71	67	8
9	63	62	52	51	45	44	44	42	51	50	48	47	50	49	49	48	63	60	67	64	71	68	70	67	9
10	63	60	53	51	44	43	43	42	51	50	49	48	49	49	48	47	63	61	68	64	72	68	70	66	10
11	60	58	53	51	44	43	43	42	51	50	50	48	49	49	48	47	63	60	69	65	72	69	68	66	11
12	58	55	53	51	43	42	44	42	50	50	51	49	50	49	50	47	62	60	69	65	72	69	67	64	12
13	59	54	52	51	42	42	44	42	50	49	52	46	51	50	51	49	64	60	70	66	72	68	67	64	13
14	59	53	52	51	44	42	45	42	50	49	46	45	52	51	53	50	66	62	70	66	72	68	67	65	14
15	54	53	52	50	45	44	42	40	50	49	46	44	51	51	54	52	67	64	70	67	72	68	66	65	15
16	54	53	51	50	47	45	41	40	49	48	45	42	51	50	56	53	69	66	69	66	72	68	67	64	16
17	53	51	50	49	48	47	41	40	49	48	44	42	50	49	58	55	69	66	69	65	72	68	67	64	17
18	51	50	49	48	47	46	41	39	49	48	44	41	49	47	58	56	69	66	70	66	72	68	66	63	18
19	52	50	49	48	46	46	41	40	49	48	46	43	47	46	58	56	69	66	70	67	72	68	65	64	19
20	54	52	49	48	46	45	41	40	48	48	47	43	46	45	58	57	69	66	70	67	71	67	66	63	20
21	54	52	48	48	45	45	42	40	51	48	47	45	47	45	57	56	68	65	70	67	70	66	67	64	21
22	54	52	48	47	45	44	41	40	50	49	50	47	49	46	58	56	67	65	71	67	69	65	65	64	22
23	53	51	48	48	44	44	42	40	50	49	49	48	50	48	58	56	66	63	70	67	69	64	66	63	23
24	53	52	49	48	44	42	42	40	50	49	50	47	51	49	58	56	66	62	69	66	69	64	67	63	24
25	54	53	49	48	42	41	42	41	50	49	51	48	51	50	59	56	67	63	69	66	69	65	67	63	25
26	56	54	49	48	41	40	42	41	50	49	51	50	51	50	60	57	67	64	70	66	69	65	67	64	26
27	55	54	49	48	40	39	42	41	50	49	50	50	52	50	60	58	66	63	71	67	69	65	68	65	27
28	55	53	48	47	41	40	41	41	49	49	50	47	53	51	60	58	66	63	71	68	69	65	69	65	28
29	55	53	47	46	41	40	41	41			47	46	55	52	60	58	65	62	72	68	69	65	69	65	29
30	55	53	46	45	41	40	43	41			48	46	55	53	61	57	65	62	72	68	69	65	69	65	30
31	55	53			41	40	47	43			NR	NR			62	59			72	68	69	66			31
AVG.	58	56	51	50	44	44	42	41	50	49	48	46	50	49	57	54	65	62	69	66	71	67	68	65	AVG.
MAX.	66		55		48		47		51		51		55		62		69		72		72		71		MAX.
MIN.	50		45		39		39		47		41		45		47		56		61		64		63		MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
72	8	14	39	1	2

LOCATION			MAXIMUM TEMPERATURE OF RECORD		MINIMUM TEMPERATURE OF RECORD		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.		DATE		DATE	FROM	TO
		SE 33 19N 3E	87.5	8/10/59	34	1/26/62	7/13/56	Present

Station located on headwall of inlet structure to Sutter Butte Canal.

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
(IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1964		Feather River at Sutter Butte Canal Company Intake nr Gridley

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1	68	64	55	53	45	45	44	43	45	44	44	43	50	48	53	51	63	59	68	65	73	68	67	64	1
2	67	64	55	53	45	45	44	43	46	44	46	43	49	47	51	49	64	60	68	64	73	68	66	63	2
3	67	63	54	52	45	45	44	43	46	45	46	43	50	47	48	47	63	60	68	65	73	68	67	62	3
4	66	63	53	52	45	44	*	*	46	44	46	43	50	48	48	46	63	60	68	65	74	68	67	63	4
5	63	62	52	52	45	45	*	*	44	42	47	44	49	47	48	46	64	60	68	65	63	69	67	63	5
6	65	61	52	49	45	45	*	*	42	41	45	44	49	47	49	46	62	61	70	66	73	68	67	63	6
7	65	62	51	50	45	44	*	*	42	41	46	43	50	47	51	47	63	59	71	67	72	69	67	63	7
8	64	62	50	49	45	44	*	*	42	41	46	42	51	47	53	49	61	58	70	67	73	68	67	64	8
9	65	62	50	50	45	45	44	43	42	41	47	43	52	49	54	51	57	55	71	67	73	68	67	63	9
10	63	61	52	50	45	44	44	43	43	42	47	44	54	51	56	53	57	54	72	67	74	68	67	62	10
11	62	60	52	50	44	43	44	43	44	43	45	44	55	52	58	55	58	55	73	67	73	69	68	64	11
12	61	59	51	51	43	42	45	44	44	43	45	43	54	52	59	56	61	56	73	68	73	69	68	64	12
13	60	59	51	51	42	42	46	45	43	42	46	43	53	51	58	56	63	59	74	69	73	69	68	63	13
14	60	58	52	51	42	42	46	44	43	41	47	43	53	50	57	55	65	60	73	68	73	68	68	64	14
15	59	58	52	50	42	42	44	43	43	42	48	44	53	51	57	54	65	62	73	69	72	68	69	65	15
16	60	58	50	48	42	41	44	42	43	41	50	45	53	51	55	54	64	62	75	69	72	68	68	66	16
17	60	58	48	47	41	41	43	42	43	42	50	46	52	50	56	53	66	62	75	70	73	68	68	64	17
18	61	58	48	47	41	41	44	43	44	42	51	47	50	49	56	54	65	61	74	70	73	69			18
19	61	59	47	46	41	40	44	43	44	42	50	47	50	48	58	55	66	62	74	69	72	69			19
20	60	58	47	46	41	41	43	42	45	43	50	47	51	48	58	55	66	62	75	70	73	68			20
21	60	58	46	44	42	41	43	42	45	44	50	46	52	49	58	55	67	62	75	70	73	68			21
22	61	58	45	44	43	42	43	42	45	44	47	45	52	50	58	55	68	63	74	70	73	68			22
23	60	58	46	45	43	42	42	42	45	44	46	44	50	48	58	55	69	65	74	69	73	69			23
24	58	56	47	46	42	41	43	42	46	44	47	44	48	46	59	56	69	66	74	70	74	69			24
25	59	56	47	45	41	41	*	*	45	44	47	43	48	45	60	57	70	66	74	70	74	69			25
26	59	56	46	45	41	41	*	*	45	44	48	44	49	46	60	58	69	66	75	69	73	69			26
27	NR	56	45	44	42	41	*	*	44	43	50	45	52	48	58	56	69	65	74	70	72	68			27
28	58	56	45	45	42	42	*	*	44	42	51	46	55	51	58	55	68	65	75	71	71	68			28
29	57	55	45	45	43	42	44	44	45	42	51	48	56	53	59	55	68	65	76	71	70	67			29
30	57	55	46	45	44	43	44	44			53	49	55	53	60	56	68	65	74	70	70	66			30
31	56	53			44	44	45	44			51	50			62	58			74	70	68	65			31
AVG.	62	59	49	48	43	43	--	--	44	43	48	45	52	49	56	53	65	61	73	68	73	68	--	--	AVG.
MAX.	68		55		45		46		46		51		56		62		70		76		74		--		MAX.
MIN.	53		44		40		42		41		42		45		46		54		64		65		--		MIN.

*For the periods January 4 to 8 and January 25 to 28 the maximum was 44° and the minimum was 43°.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
76	7	29	40	12	19

LOCATION			MAXIMUM TEMPERATURE OF RECORD		MINIMUM TEMPERATURE OF RECORD		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.		DATE		DATE	FROM	TO
		SE 33 19N 3E	87.5	8/19/59	34	1/26/62	7/13/56	Present

Station located on headwall of inlet structure to Sutter Butte Canal.

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
(IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1965		Feather River at Sutter Butte Canal Company Intake nr Gridley

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1					48	47	43	42	46	45	47	45	50	48	55	54	60	59	68	67	70	68	69	68	1
2					NR	NR	NR	NR	46	45	46	45	49	48	54	51	59	58	68	67	70	69	69	68	2
3					NR	NR	NR	NR	45	45	47	45	49	47	52	50	60	58	69	67	72	70	69	68	3
4					45	44	NR	NR	45	45	47	45	49	47	53	50	62	60	70	68	72	71	68	67	4
5					45	44	NR	NR	46	45	48	46	48	48	52	51	63	62	70	69	72	71	69	66	5
6			54	51	44	43	NR	NR	47	46	47	46	49	48	50	49	64	63	70	69	72	71	66	64	6
7			53	51	44	43	NR	NR	46	45	47	46e	47	46	50	48	63	62	70	69	72	71	65	63	7
8			54	52	45	44	NR	NR	45	44e	48	46	47	46	51	49	63	62	70	68	72	70	65	64	8
9			53	52	46	44	NR	NR	45	44e	47	46e	46	45	53	51	62	61	69	68	71	70	66	64	9
10			52	50	47	45	NR	NR	44	43e	46	46e	46	45	54	51	63	62	68	68	70	70	66	64	10
11			50	49	48	47	NR	NR	43	42	48	46e	47	45	55	53	64	62	68	67	70	68	66	64	11
12			50	48	49	46	NR	NR	44	42	48	47	49	47	55	54	66	64	68	66	69	68	65	64	12
13			49	48	45	44	NR	NR	43	42	48	47	48	47	55	54	65	64	68	67	68	68	65	64	13
14			48	46	44	43	NR	NR	44	42	48	46e	48	47	57	54	64	62	68	67	69	68	65	64	14
15			48	47	44	43	NR	NR	45	43e	48	46	48	47	57	55	62	60	69	68	70	68	65	64	15
16			47	46	44	43	NR	NR	45	43e	48	47e	50	48	57	55	61	60	70	68	70	69	66	64	16
17			46	45	44	43	NR	NR	44	43	48	47e	49	48	58	56	60	60	70	69	71	70	64	63	17
18			47	45	44	43	NR	NR	45	43	48	47e	49	48	57	55	61	59	71	69	71	69	63	61	18
19			46	45	44	43	NR	NR	46	44e	48	47	52	49	57	56	63	61	70	69	70	69	62	60	19
20			46	45	46	44	NR	NR	47	45e	47	46	52	51	58	56	65	62	69	68	70	69	62	60	20
21			46	44	49	46	NR	NR	47	45e	47	45	51	50	58	57	67	64	68	68	70	68	62	61	21
22			46	45	51	48	NR	NR	47	45	48	46	52	50	57	56	68	66	68	68	69	68	62	61	22
23			46	45	51	50	NR	NR	46	45	48	47	53	51	56	55	68	67	69	68	68	68	63	62	23
24			47	45	53	51	NR	NR	45	44	49	48	55	53	56	55	68	66	69	68	68	68	63	62	24
25			47	46	53	52	NR	NR	46	44	49	48	55	54	56	55	67	66	69	68	68	68	63	62	25
26			48	47	52	51	NR	NR	47	44e	48	47	56	54	57	56	66	65	68	67	68	67	63	63	26
27			48	47	51	49	NR	NR	47	45e	48	46	56	55	58	57	67	65	69	68	68	67	63	62	27
28			48	47	49	46	NR	NR	47	46e	48	46	56	55	59	58	67	65	69	68	68	67	62	61	28
29			47	46	46	45	NR	NR			49	47	56	55	60	59	68	66	69	68	68	67	62	61	29
30			47	47	45	44	43	43			49	48	56	54	60	60	68	67	68	68	68	67	62	60	30
31					44	43	46	45			48	48			60	60			68	67	68	67			31
AVG.	--	--	49	47	47	46	--	--	46	44	48	46	51	49	56	54	64	63	69	68	70	69	65	69	AVG.
MAX.	--		54		53		--		47		49		56		60		68		71		72		69		MAX.
MIN.	--		44		43		--		42		45		45		48		58		66		67		60		MIN.

e - Estimated

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
72	8	4	42	2	12

LOCATION			MAXIMUM TEMPERATURE OF RECORD		MINIMUM TEMPERATURE OF RECORD		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.		DATE		DATE	FROM	TO
		SE 33 19N 3E	87.5	8/10/59	34	1/26/62	7/13/56	Present

Station located on headwall of inlet structure to Sutter Butte Canal.

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
(IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1964	AO 5135	Feather River at Yuba City

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1																					78	73	69	66	1
2																					77	72	70	68	2
3																					78	72	72	69	3
4																					77	71	72	70	4
5																					78	74	72	69	5
6																					80	76	72	69	6
7																					78	76	70	68	7
8																					79	75	70	68	8
9																					77	74	69	67	9
10																					79	74	70	68	10
11																					76	74	71	69	11
12																					75	74	72	70	12
13																					78	73	70	69	13
14																					77	72	70	69	14
15																					74	70	71	60	15
16																					75	71	72	70	16
17																					76	72	71	69	17
18																					76	71	69	68	18
19																					74	72	68	66	19
20																					75	72	69	67	20
21																			Installed		77	73	68	65	21
22																			79@	1555	76	73	66	64	22
23																			81	77	77	71	69	66	23
24																			85	79	76	71	69	67	24
25																			86	81	76	71	69	66	25
26																			86	79	74	71	67	65	26
27																			84	79	73	70	66	64	27
28																			84	78	73	69	65	64	28
29																			89	80	72	68	65	64	29
30																			76	83	72	68	66	64	30
31																			80	74	68	64			31
AVG.																					76	72	69	67	AVG.
MAX.																					80		72		MAX.
MIN.																					64		64		MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY

LOCATION			MAXIMUM TEMPERATURE OF RECORD		MINIMUM TEMPERATURE OF RECORD		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.		DATE		DATE	FROM	TO
39 08 20	121 36 17	SE 23 15N 3E	89	July 29,1964	64	Sept. 28,1964		

Station located at Sacramento Northern Railroad Bridge.

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
(IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1965	A 0 5135	Feather River at Yuba City

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1	66	64	58	57	47	47	39	38	41	41	47	46	50	50	57	56	62	61	72	70	77	75	72	71	1
2	66	64	57	56	47	47	38	38	42	41	47	47	50	50	57	55	62	61	76	72	77	75	70	70	2
3	67	65	56	55	47	46	38	38	42	42	47	47	50	50	55	52	63	62	76	74	76	75	70	70	3
4	67	65	55	55	46	46	40	38	42	42	47	47	50	50	53	52	64	63	76	74	76	75	70	70	4
5	67	65	55	55	46	45	43	40	42	42	48	47	50	50	53	52	65	64	76	75	77	76	69	68	5
6	67	66	55	54	45	45	44	43	43	42	48	48	50	50	53	52	65	64	77	75	77	76	68	66	6
7	67	66	54	54	45	45	44	42	43	43	48	48	50	50	53	51	64	63	76	74	77	76	66	65	7
8	66	64	54	54	45	45	43	40	43	43	49	48	50	50	54	51	63	62	76	74	76	75	66	65	8
9	65	63	55	54	46	45	40	40	44	43	49	49	50	49	54	53	64	62	75	73	75	75	66	65	9
10	65	64	54	51	47	46	40	40	43	43	49	49	49	48	55	54	65	64	73	71	75	75	66	66	10
11	65	63	51	49	48	47	41	40	43	43	49	49	48	48	57	55	66	65	73	71	75	74	66	66	11
12	64	63	49	49	47	45	41	41	43	43	50	49	49	48	58	56	67	66	74	72	74	72	66	65	12
13	64	63	49	47	45	43	41	41	43	43	50	49	50	49	58	57	67	67	75	73	72	72	67	66	13
14	63	61	47	46	43	43	41	41	43	43	49	49	50	50	58	57	67	66	75	73	73	72	67	66	14
15	63	61	46	45	43	43	41	41	44	43	50	49	50	50	58	57	66	64	77	75	73	73	68	67	15
16	63	62	45	44	43	42	41	41	44	44	50	50	51	50	59	58	65	64	78	76	73	73	68	67	16
17	63	61	44	44	42	42	41	41	44	44	50	50	50	50	60	58	64	62	78	76	73	73	67	64	17
18	62	60	44	44	42	42	41	41	44	44	50	50	50	50	60	58	64	62	77	75	74	73	64	62	18
19	62	60	44	44	43	42	41	41	44	44	50	50	51	50	59	58	66	64	76	74	74	74	62	62	19
20	62	60	45	44	44	43	41	41	44	44	50	50	52	51	58	57	69	66	75	71	74	74	62	61	20
21	61	59	44	44	47	44	42	41	44	44	50	50	52	52	58	57	69	67	73	70	74	74	62	61	21
22	60	59	45	44	47	47	42	42	45	44	50	50	53	52	58	56	69	67	75	72	74	73	62	62	22
23	60	58	45	45	48	47	42	42	45	45	50	50	54	53	57	55	69	68	76	74	74	73	62	62	23
24	60	59	46	45	48	47	42	42	45	45	50	50	55	54	56	54	69	68	76	74	73	73	63	62	24
25	59	58	46	46	NR	NR	42	39	45	45	50	50	58	55	58	56	69	67	76	74	73	73	63	63	25
26	58	58	46	46	NR	NR	39	38	45	45	50	50	58	57	60	57	68	66	74	68	73	73	65	64	26
27	58	58	46	46	NR	NR	38	38	46	45	50	49	58	57	61	59	69	67	73	70	73	73	64	64	27
28	58	58	46	46	NR	NR	39	38	46	46	49	48	59	58	63	60	71	68	75	73	73	73	64	63	28
29	58	58	47	46	NR	NR	39	39	46	46	49	49	59	58	63	62	71	69	75	72	74	73	64	63	29
30	58	58	47	47	NR	NR	41	39	———		50	49	58	57	63	62	71	68	76	74	73	72	63	63	30
31	58	58	———		41	39	41	41	———		50	50	———		63	61	———		75	75	72	71	———		31
AVG.	63	61	49	49	45	45	41	40	44	44	49	49	52	52	58	56	66	65	75	73	74	74	66	65	AVG.
MAX.	67		58		48		44		46		50		59		63		71		78		77		72		MAX.
MIN.	58		44		39		38		41		46		48		51		61		68		71		61		MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
78	July	16	38	Jan.	

LOCATION			MAXIMUM TEMPERATURE OF RECORD		MINIMUM TEMPERATURE OF RECORD		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.		DATE		DATE	FROM	TO
39 08 20	121 36 17	SE 23 15N 3E	89	July 29, 1964	38	January 1965	July 22, 1964	Present

Station located at Sacramento Northern Railroad Bridge.

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
(IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1965	B 9 5340	Old River @ Clifton Court Ferry

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1	NR		65		52		NR		49		53		59		NR		71		69		76		75		1
2	NR		66		54		NR		49		52		58		NR		70		70		78		75		2
3	NR		63		54		NR		49		52		58		61		71		73		77		75		3
4	NR		63		NR		NR		49		53		58		58		71		74		76		74		4
5	NR		63				48		49		54		58		58		71		76		77		73		5
6	NR		62				48		48		54		57		58		69		77		77		73		6
7	70		60				48		48		53		56		55		67		76		77		71		7
8	68		60				48		48		53		52		55		65		77		79		71		8
9	68		60				48		48		54		52		56		65		78		79		71		9
10	69		58				47		48		54		49		60		64		76		80		71		10
11	69		56				47		47		54		49		60		66		74		79		71		11
12	69		57				47		47		54		48		63		67		73		74		71		12
13	69		57				47		47		54		48		67		66		78		75		71		13
14	70		54				47		48		51		48		65		65		76		76		71		14
15	70		51				47		48		53		48		66		64		79		80		71		15
16	72		48				47		48		53		NR		68		62		78		80		71		16
17	70		45				47		49		55				69		63		80		77		65		17
18	71		44				46		50		54				70		63		80		75		63		18
19	70		42				46		49		54				69		66		80		72		63		19
20	68		40				46		51		54				68		68		77		73		63		20
21	68		40				47		52		55				66		70		74		73		63		21
22	68		42				47		53		55				65		72		74		72		63		22
23	68		44				48		53		57				64		73		75		73		63		23
24	66		46				51		52		57				64		73		76		73		64		24
25	66		47				51		51		54				62		72		77		73		64		25
26	64		51				51		49		54				62		68		75		74		64		26
27	66		51				49		51		56				65		67		73		76		64		27
28	63		51				49		52		58				69		67		73		77		62		28
29	64		52				49		---		58				72		70		73		78		61		29
30	64		52				49		---		59		NR		73		71		73		80		61		30
31	67		---		NR		49		---		59		---		72		---		73		78		---		31
AVG.	68		53		---		48		49		55		---		64		68		75		76		68		AVG.
MAX.	--		--		--		--		--		--		--		--		--		--		--		--		MAX.
MIN.	--		--		--		--		--		--		--		--		--		--		--		--		MIN.

All figures picked from chart at HH tide.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY

LOCATION			MAXIMUM TEMPERATURE OF RECORD		MINIMUM TEMPERATURE OF RECORD		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.		DATE		DATE	FROM	TO
37 49 28	121 33 05	SE 20 1S 4E	83	July 25, 1964	43		10-18-63	Present

Station located approximately 2,000' below junction with Grant Line Canal.

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
(IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1964	B 9 5340	Old River @ Clifton Court Ferry

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1			60		53		49		NR		51		61		65		69		NR		74		71		1
2			61		54		49				51		59		63		68		NR		72		71		2
3			60		53		49				51		57		63		67		72		72		71		3
4			60		52		49				50		58		62		69		70		74		72		4
5			60		51		47				53		57		60		70		70		70		72		5
6			60		50		46				52		56		57		73		73		72		71		6
7			58		47		48				50		58		56		71		76		72		69		7
8			57		47		48				49		65		58		71		78		75		69		8
9			60		47		48				49		64		59		66		76		73		68		9
10			61		48		49				50		64		63		66		75		73		69		10
11			60		48		49				51		65		65		68		79		72		70		11
12			59		48		47				51		61		68		NR		80		73		69		12
13			60		44		48				51		62		68				81		70		67		13
14			60		45		47				55		63		66				79		71		67		14
15			61		45		47				57		65		67				80		72		68		15
16			62		45		43				55		69		67				76		72		71		16
17			59		43		45		NR		57		69		64				78		75		72		17
18	67		60		43		46		51		58		65		65				79		76		71		18
19	67		58		44		49		53		58		64		64				78		76		71		19
20	66		56		45		50		53		58		64		63				78		77		NR		20
21	68		54		46		50		53		59		68		62				77		79				21
22	66		50		46		50		53		58		68		61				78		79				22
23	63		48		46		51		54		54		64		63				78		79				23
24	62		49		46		51		53		55		62		64				80		79				24
25	63		50		47		51		53		56		60		66				83		78				25
26	63		50		47		51		53		57		60		68				82		77				26
27	64		50		47		52		52		58		62		66				82		74				27
28	64		51		48		52		52		56		68		65				82		73				28
29	64		52		48		52		52		63		68		66				82		74				29
30	63		53		49		52				62		67		67		NR		78		74		NR		30
31	62				48		52				62				69				74		74				31
AVG.	---		57		47		49		---		55		63		64		---		78		74		---		AVG.
MAX.	---		---		---		---		---		---		---		---		---		---		---		---		MAX.
MIN.	---		---		---		---		---		---		---		---		---		---		---		---		MIN.

All figures picked from chart at HH tide.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY

LOCATION			MAXIMUM TEMPERATURE OF RECORD		MINIMUM TEMPERATURE OF RECORD		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.		DATE		DATE	FROM	TO
37 49 28	121 33 05	SE20 1S 4E	83	July 25, 1964	43		10-18-63	Present

Station located approximately 2,000' below junction with Grant Line Canal.

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
(IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1965	A0 2170	Sacramento River at Fremont Weir, West End

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1																			69	69	68	67	66	65	1
2																			70	69	67	66	66	66	2
3																			70	69	67	66	66	66	3
4																			71	70	68	66	66	66	4
5																			72	71	68	67	66	66	5
6																			72	71	69	68	66	66	6
7																			71	71	69	68	66	65	7
8																			71	70	69	68	65	64	8
9																			70	70	69	68	64	64	9
10																			70	70	69	68	64	64	10
11																			70	69	68	67	64	64	11
12																			69	69	68	67	64	64	12
13																			69	68	67	66	64	64	13
14																			68	68	67	66	64	64	14
15																			68	67	67	66	65	64	15
16																			69	67	68	67	65	64	16
17																			68	67	68	67	64	62	17
18																			68	67	68	68	62	61	18
19																			68	67	68	68	61	60	19
20																			67	66	68	67	60	60	20
21																			68	67	67	66	60	60	21
22																			68	67	67	67	61	61	22
23																	71	71	68	67	67	67	62	61	23
24																	71	71	68	68	67	66	62	62	24
25																	71	71	68	68	66	66	62	62	25
26																	71	69	68	67	67	66	62	62	26
27																	69	69	67	66	67	66	62	62	27
28																	69	69	67	66	66	65	62	62	28
29																	70	69	67	66	67	66	62	62	29
30																	70	69	67	67	67	66	62	61	30
31																			67	66	67	66			31
AVG.																			69	68	68	67	64	63	AVG.
MAX.																			72		69		66		MAX.
MIN.																			66		65		60		MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY

LOCATION			MAXIMUM TEMPERATURE OF RECORD		MINIMUM TEMPERATURE OF RECORD		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.		DATE		DATE	FROM	TO
38 45 34	121 39 59	NW 32 1N 3E	72	July 5, 1965	60		June 23,1965	Present

Station located 0.1 mile West of Weir, 4.0 miles South East of Knights Landing.

TABLE D - 8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
(IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1965	A21600	SACRAMENTO RIVER NEAR MOUNT SHASTA

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1																	58	51	63	53	70	63	64	60	1
2																	61	52	64	54	70	63	65	60	2
3																	62	54	62	54	70	63	65	59	3
4																	61	53	64	54	70	62	64	58	4
5																	63	55	65	54	70	62	60	57	5
6																	62	55	65	55	70	62	61	57	6
7																	59	54	65	55	70	62	61	56	7
8																	58	54	65	56	71	61	62	56	8
9																	62	53	67	55	70	60	62	56	9
10																	64	55	65	57	68	61	62	56	10
11																	63	57	65	56	64	61	62	57	11
12																	61	55	66	55	64	61	62	56	12
13																	54	51	66	56	65	57	61	57	13
14																	55	51	67	57	64	56	62	56	14
15																	68	50	68	58	64	56	62	59	15
16																	54	51	69	59	64	58	58	57	16
17																	54	53	69	61	64	60	56	52	17
18																	60	52	68	61	61	60	56	51	18
19																	62	52	68	59	65	58	57	51	19
20																	63	54	68	60	61	59	58	52	20
21																	64	55	66	58	66	60	59	54	21
22																	64	55	67	58	66	59	60	54	22
23																	63	56	69	58	66	62	60	56	23
24																	64	56	68	58	65	61	61	56	24
25																	60	54	66	60	66	61	60	55	25
26															58	49	59	51	68	61	66	60	59	55	26
27															59	51	60	51	67	59	66	60	58	56	27
28															59	52	62	52	67	57	64	60	57	55	28
29															59	52	63	53	68	57	65	58	57	54	29
30															60	53	60	54	65	60	65	58	59	54	30
31															58	53			63	62	66	59			31
AVG.															59	52	61	53	66	57	66	60	60	56	AVG.
MAX.															60		68		69		71		65		MAX.
MIN.															49		50		53		56		51		MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
71	8	8	49	5	26

LOCATION			MAXIMUM TEMPERATURE OF RECORD		MINIMUM TEMPERATURE OF RECORD		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.		DATE		DATE	FROM	TO
41 16 00	122 18 38	SE33 40N 4W	71	8/8/65	41	5/26/65	5/65	Date

Station located 1.5 mi. SW of junction of State Highway 89 and U. S. Highway 99, 3mi. S. of Mount Shasta.

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
(IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1965	A 0 2105	SACRAMENTO RIVER AT SACRAMENTO WEIR

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1					50	50	44	43	47	47	49	49	53	53	61	60	65	64	71	68	70	68	68	67	1
2					50	50	44	43	47	47	49	49	53	53	61	60	64	64	73	70	70	68	68	67	2
3					50	50	44	43	47	47	50	49	53	53	60	59	64	64	74	71	70	68	69	67	3
4					50	50	44	43	47	47	50	50	53	53	59	58	64	64	75	72	70	68	68	66	4
5					50	50	45	43	47	47	51	50	53	53	58	57	65	64	76	73	71	69	67	66	5
6					50	49	46	45	47	47	51	51	53	53	57	57	65	65	75	73	72	70	66	64	6
7					49	49	46	45	47	47	51	51	53	52	57	56	66	65	74	71	73	71	66	65	7
8					49	48	45	44	47	47	52	51	52	52	56	56	66	66	74	71	73	71	66	64	8
9					48	48	44	44	47	46	53	52	52	51	57	56	66	66	74	72	72	71	66	64	9
10					49	48	44	44	46	46	53	53	51	50	58	57	66	65	72	70	72	71	67	65	10
11					50	49	45	44	46	46	53	53	50	49	59	58	67	66	71	69	70	68	67	65	11
12					50	50	45	45	46	45	53	53	50	49	60	59	68	67	72	69	70	68	66	65	12
13					50	49	46	45	45	45	53	53	51	50	60	60	69	68	72	70	71	69	66	65	13
14			52	52	49	48	46	46	45	45	53	53	51	51	60	60	69	69	72	70	71	70	66	65	14
15			52	51	48	48	47	46	45	45	53	53	52	51	61	60	69	69	73	70	70	69	67	65	15
16			51	48	48	47	47	47	46	45	53	53	52	52	62	61	69	69	74	72	71	69	66	65	16
17			48	48	47	46	47	47	46	46	53	53	52	51	63	62	69	68	73	72	71	70	64	62	17
18			48	47	46	46	47	47	47	46	53	53	51	51	63	63	69	68	72	71	71	70	63	62	18
19			47	46	46	46	47	47	47	47	53	53	52	51	63	63	71	68	72	70	71	70	62	61	19
20			46	46	47	46	47	47	47	47	54	53	52	52	63	62	72	70	71	69	71	70	62	60	20
21			46	46	48	47	47	47	48	47	54	54	54	52	62	61	72	70	70	68	70	69	62	61	21
22			47	46	48	48	47	47	48	48	54	54	55	54	61	61	72	70	71	69	70	68	62	61	22
23			47	47	51	48	47	47	48	48	54	53	56	55	62	61	70	69	71	69	70	68	64	62	23
24			48	47	52	51	47	47	48	48	53	53	57	56	62	61	70	68	72	70	69	68	65	63	24
25			49	48	51	50	47	47	48	48	53	53	58	57	61	61	69	68	70	69	68	67	65	63	25
26			50	49	50	50	47	46	48	48	53	53	59	58	61	61	70	67	69	68	69	67	64	63	26
27			50	50	50	49	46	46	48	48	53	53	60	59	62	61	70	67	69	67	70	69	63	62	27
28			50	50	49	47	46	46	49	48	53	53	60	60	63	62	71	68	69	67	70	69	62	61	28
29			50	50	47	45	46	46	49	49	53	52	60	60	65	63	72	70	69	67	69	68	62	60	29
30			50	50	45	44	47	46			52	52	60	60	65	65	71	68	69	68	70	68	62	60	30
31					44	44	47	47			53	52			65	65			70	68	69	68			31
AVG.					49	48	46	45	47	47	52	52	54	53	61	60	68	67	72	70	70	69	65	64	AVG.
MAX.					52		47		49		54		60		65		72		76		72		69		MAX.
MIN.					44		43		45		49		49		56		64		67		67		60		MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
76	July	5	43	Jan.	1

LOCATION			MAXIMUM TEMPERATURE OF RECORD		MINIMUM TEMPERATURE OF RECORD		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.		DATE		DATE	FROM	TO
38 36 09	121 33 12	NE 29 9N 4E	76	July 5, 1965	43	Jan. 3, 1965	Nov. 14,1964	Present

Station located 100' below weir, 4 miles North West of Sacramento.

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
(IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1964	B 9 1700	Sacramento River At Walnut Grove

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1									50	47	51	50	62	60	63	61	76	74	74	71	73	71	70	69	1
2									50	48	50	50	61	60	64	62	78	73	74	71	72	71	69	69	2
3									50	49	50	49	59	59	64	62	78	73	74	71	72	70	69	68	3
4									50	49	50	49	59	58	63	61	78	73	74	70	72	70	69	68	4
5									50	48	50	49	59	58	62	61	78	74	72	70	72	70	69	69	5
6									50	48	51	50	58	57	62	60	79	74	72	70	73	71	69	69	6
7									50	47	52	51	58	57	61	60	79	74	72	70	73	71	69	69	7
8									50	47	52	51	58	57	61	60	79	68	74	71	73	71	69	69	8
9									50	47	52	51	58	56	62	60	71	68	74	71	73	71	69	68	9
10									49	46	52	51	59	57	64	61	70	67	74	71	72	70	69	68	10
11									49	47	52	52	60	58	67	63	66	67	76	72	72	70	70	69	11
12									49	47	53	53	61	60	69	65	68	66	77	73	72	70	71	70	12
13									49	47	53	53	60	59	71	67	69	67	78	73	72	71	70	69	13
14									49	46	53	53	61	59	72	67	72	68	77	73	73	70	70	69	14
15							48	44	49	46	53	53	62	59	72	67	73	68	77	73	73	70	70	69	15
16							50	44	49	46	53	53	63	61	71	68	73	69	78	73	72	70	71	70	16
17							49	45	49	47	54	53	64	62	70	67	73	69	79	73	72	70	71	70	17
18							49	45	49	47	55	54	64	61	70	67	74	69	78	73	72	70	71	70	18
19							49	45	49	48	55	54	63	61	70	68	72	68	76	73	72	71	71	70	19
20							49	46	50	49	56	55	63	61	70	67	73	69	75	71	73	71	71	70	20
21							49	47	50	49	56	56	63	61	70	67	73	69	74	71	74	72	70	70	21
22							50	46	51	50	56	56	63	61	71	68	74	70	73	70	74	72	70	69	22
23							50	46	51	50	56	56	63	61	72	68	75	70	73	70	74	72	69	68	23
24							49	46	51	50	56	56	62	60	72	68	77	71	73	70	74	72	68	67	24
25							49	45	51	50	56	55	62	60	72	68	78	72	73	68	74	72	69	67	25
26							49	46	51	50	56	56	62	60	75	71	79	72	72	69	73	71	68	68	26
27							49	45	51	50	56	56	62	60	74	71	78	72	72	70	73	71	68	68	27
28							49	46	51	50	56	56	62	61	74	70	77	72	73	70	72	71	69	68	28
29							49	46	51	50	57	56	63	61	74	71	76	72	73	71	72	71	69	68	29
30							49	47	------		58	57	63	61	75	71	75	71	73	71	72	70	68	68	30
31							49	47	------				------		76	71	------		74	71	72	70	------		31
AVG.									50	48	54	53	61	60	69	66	75	70	74	71	73	71	70	69	AVG.
MAX.							50		51		58		64		76		79		79		74		71		MAX.
MIN.							44		46		49		56		60		66		68		70		67		MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
79	June	6	44	Jan.	15

LOCATION			MAXIMUM TEMPERATURE OF RECORD		MINIMUM TEMPERATURE OF RECORD		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.		DATE		DATE	FROM	TO
38 14 22	121 30 57	SW35 5N 4E	79		44		1-15-64	Present

Station located at head of Georgiana Slough, immediately S.W. of Walnut Grove.

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
(IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1965	B 9 1700	Sacramento River at Walnut Grove

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1	68	67	60	60	54	51	51	51	48	47	53	52	56	56	60	58	69	65	74	69	73	71	72	72	1
2	68	67	60	59	54	52	50	50	48	47	54	52	56	56	60	58	68	65	75	70	73	71	71	71	2
3	68	68	60	58	55	53	50	50	48	47	54	52	56	56	59	58	68	65	75	70	73	71	71	70	3
4	68	68	59	57	56	52	50	49	48	47	54	53	56	56	59	58	68	65	76	70	73	71	71	70	4
5	69	68	58	56	55	52	49	48	48	46	54	53	56	56	58	58	69	65	77	70	73	71	70	69	5
6	69	68	58	57	55	50	48	47	NR	NR	53	52	56	56	58	58	69	65	77	71	74	71	69	69	6
7	69	68	58	57	54	50	48	47	NR	NR	53	52	55	55	58	58	68	65	77	71	74	71	69	69	7
8	69	68	59	57	54	50	47	47	NR	NR	52	52	55	54	58	58	68	65	77	71	74	71	69	68	8
9	68	67	59	57	54	50	47	47	48	46	52	52	54	53	58	58	68	65	75	70	74	71	69	68	9
10	68	67	59	57	54	50	47	47	48	45	53	52	54	53	59	59	68	65	75	70	74	72	69	68	10
11	68	67	59	57	54	50	47	47	48	45	53	53	54	53	61	59	69	66	74	70	74	72	68	68	11
12	68	67	58	55	54	51	48	47	49	44	53	53	53	52	62	60	70	66	74	70	72	71	68	68	12
13	68	67	58	55	54	51	48	47	48	43	53	53	52	52	62	61	70	66	74	71	72	71	68	68	13
14	67	67	58	53	53	49	48	47	48	43	53	53	53	52	62	61	70	66	74	70	73	72	69	68	14
15	67	67	57	52	52	48	48	47	48	44	54	54	54	53	62	61	70	66	74	70	73	72	69	68	15
16	66	66	58	48	52	47	48	47	48	44	54	54	54	53	63	61	71	66	76	71	73	72	69	69	16
17	66	66	56	46	52	46	48	46	48	45	54	54	55	53	64	62	71	67	75	71	74	72	69	68	17
18	66	65	56	44	51	44	47	46	49	46	54	54	54	54	64	62	71	66	75	71	74	71	68	67	18
19	65	65	53	44	50	43	47	46	49	47	55	55	54	52	64	62	70	66	75	71	74	71	68	67	19
20	65	65	54	44	50	44	47	46	49	47	56	55	53	53	63	62	71	66	74	71	74	72	68	66	20
21	65	65	53	44	50	45	47	47	50	49	57	56	53	53	63	62	72	66	74	70	74	72	65	65	21
22	65	64	52	45	49	47	48	47	50	49	58	57	53	53	63	62	72	66	74	70	73	72	65	65	22
23	64	64	52	45	50	49	48	47	51	50	58	57	53	53	63	62	72	67	75	71	73	72	65	65	23
24	65	63	53	47	51	50	48	46	52	51	57	57	53	53	64	62	72	67	74	71	72	71	65	65	24
25	63	63	53	48	51	51	48	48	52	50	57	57	53	53	64	62	71	66	74	70	71	70	65	65	25
26	64	62	53	48	51	51	48	48	52	50	57	57	54	53	64	62	70	66	73	70	72	70	65	65	26
27	62	62	54	49	51	51	48	48	52	51	57	57	56	53	65	63	71	66	72	70	72	71	64	64	27
28	62	61	54	51	51	51	48	48	53	52	57	57	58	56	66	63	71	67	72	70	73	71	64	64	28
29	62	61	54	51	51	51	48	47	———		56	56	59	57	68	65	73	68	72	70	73	71	64	64	29
30	61	61	54	51	51	51	48	48	———		56	56	60	57	70	66	74	70	72	70	73	71	64	64	30
31	61	60	———		51	51	48	47	———		56	56	———		71	66	———		73	71	72	71	———		31
AVG.	66	65	56	52	52	49	48	47	49	47	55	54	55	54	62	61	70	66	74	70	73	71	68	67	AVG.
MAX.	69		60		56		51		53		58		60		71		74		77		74		72		MAX.
MIN.	60		44		43		46		43		52		52		58		65		69		70		64		MIN.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
77	July	5	43	Feb.	13

LOCATION			MAXIMUM TEMPERATURE OF RECORD		MINIMUM TEMPERATURE OF RECORD		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.		DATE		DATE	FROM	TO
38 14 22	121 30 57	SW35 5N 4E	79		44		1-15-64	Present

TABLE D-8

WATER TEMPERATURES
DAILY MAXIMUM and MINIMUM
(IN DEGREES FAHRENHEIT)

WATER YEAR	STATION NO.	STATION NAME
1965	B 9 5620	San Joaquin River at Rindge Pump

DAY	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		DAY
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	
1									46	46	61	59	62	59	73	70	72	70	79	74	79	77	78	76	1
2									47	47	61	53	61	60	70	67	73	71	79	76	80	76	80	75	2
3									47	46	57	54	63	60	71	65	74	71	80	76	81	77	80	76	3
4									47	46	58	55	65	60	66	64	74	72	80	77	79	78	79	75	4
5									48	47	58	56	62	60	66	62	75	71	81	78	83	79	78	75	5
6									49	48	57	56	60	59	62	59	75	72	80	78	84	79	76	74	6
7							50	50	49	48	57	55	59	57	62	58	73	71	82	78	83	79	77	73	7
8							50	49	50	49	57	56	56	55	64	59	72	69	81	78	83	78	76	74	8
9							49	47	50	49	57	56	54	51	65	61	72	69	81	78	83	79	77	73	9
10							47	46	50	47	56	55	49	50	66	61	71	69	82	77	83	79	77	73	10
11							47	46	48	47	55	54	50	49	68	63	70	69	81	77	81	78	78	74	11
12							46	46	48	47	54	50	50	49	69	65	71	68	82	78	81	77	77	74	12
13							46	46	48	47	52	50	50	49	71	67	69	66	82	78	82	77	77	74	13
14							47	47	49	48	53	51	51	49	73	67	69	67	82	78	84	79	76	74	14
15							47	47	50	49	53	50	52	50	79	68	68	66	82	78	81	78	77	72	15
16							47	47	53	50	53	53	56	52	78	69	67	65	83	80	82	78	74	69	16
17							47	46	57	51	54	51	56	54	81	69	67	66	83	80	81	78	70	63	17
18							46	46	59	52	56	52	57	55	82	70	68	64	82	80	81	77	66	60	18
19							47	47	61	53	57	53	62	56	73	71	71	66	81	79	81	77	65	62	19
20							48	47	60	54	58	54	59	58	73	70	72	68	81	78	80	77	66	64	20
21							47	47	60	57	59	57	64	59	71	69	71	68	82	77	80	76	68	64	21
22							49	47	59	58	60	59	64	60	72	70	72	69	82	78	79	75	70	65	22
23							50	49	59	56	60	58	67	61	72	68	73	69	81	77	78	74	69	67	23
24							51	51	59	57	59	57	68	62	70	66	75	70	79	77	77	74	69	67	24
25							51	50	59	57	59	56	69	64	73	67	71	69	78	76	77	74	69	67	25
26							50	48	61	59	58	56	71	66	72	68	73	68	79	75	78	75	69	67	26
27							49	48	60	59	58	57	71	68	72	69	75	70	78	74	80	77	68	67	27
28							48	47	59	59	61	57	71	69	72	69	76	72	79	74	80	77	68	65	28
29							47	46	———		58	57	74	70	72	67	76	72	79	74	81	78	68	65	29
30							47	46	———		58	57	76	71	73	70	79	74	79	75	80	78	71	65	30
31							46	46	———		60	58	———		72	71	———		79	75	79	77	———		31
AVG.							48	47	53	51	57	55	61	58	71	66	72	69	81	77	81	77	73	70	AVG.
MAX.							51		61		61		76		82		79		83		84		80		MAX.
MIN.							46		46		50		49		58		64		74		74		60		MIN.

Probe not long enough on LL tide, becomes exposed to air.

YEARLY EXTREMES

MAXIMUM			MINIMUM		
TEMPERATURE	MO.	DAY	TEMPERATURE	MO.	DAY
84	Aug.	6,14	46		

LOCATION			MAXIMUM TEMPERATURE OF RECORD		MINIMUM TEMPERATURE OF RECORD		PERIOD OF RECORD	
LATITUDE	LONGITUDE	1/4 SEC. T. & R. B. & M.		DATE		DATE	FROM	TO
37 59 51	121 25 06	NW 27 2N 5E	84	8-6,14,-65	46		1-7-65	Present

Station located on Rindge Tract at Fourteen mile Slough near junction with Stockton Ship Channel, 8 mi. N.W. of Stockton.

APPENDIX E

GROUND WATER QUALITY

ACKNOWLEDGMENTS

The coverage of the Ground Water Quality Data Program in northeastern California is made possible through the cooperation of local agencies. The Department wishes to express its appreciation for the valuable assistance and cooperation received from the following county agencies:

Butte County Farm Advisor
Colusa County Farm Advisor
Glenn County Farm Advisor
Placer County Health Department
Sacramento County Farm Advisor
Shasta County Department of Water Resources
Sutter County Farm Advisor
Tehama County Farm Advisor
Yolo County Farm Advisor
Yuba County Farm Advisor

APPENDIX E: INTRODUCTION

The data presented in this appendix are measured values of selected quality characteristics that demonstrate the dissolved mineral and physical conditions of ground waters in northeastern California as shown on the "Area Orientation Map", which area lies within the jurisdictions of the Central Valley (No. 5) and Lahontan (No. 6) Regional Water Quality Control Boards. The data in this bulletin were collected during the 1964-65 water year, from October 1, 1964 through September 30, 1965.

Figure E-1, Ground Water Basins in Northeastern California, shows the location and index numbers of the areas where samples were collected. The Index of Monitored Areas provides a tabulation of the basins according to the assigned basin index number.

Tabulated values are expressed in milligrams per liter which is equivalent to parts per million. Equivalents per liter are tabulated, and where applicable, the percent reactance values. The computations and tabulation are by computer processes.

Field sampling was performed in accordance with accepted engineering practice. Comments on local conditions were noted in field books, which are on file in the Department's District office.

Laboratory analysis of ground water samples was performed in the Department's chemical laboratory at Bryte and by contract with the U. S. Geological Survey laboratory in Sacramento, in accordance with procedures outlined in "Standard Methods for the Examination of Water and Waste Water", Eleventh Edition.

The data were collated, reviewed to note trends or significant changes, and published.

Specific Conductance and pH were determined in the laboratory.

Mineral Constituents were determined in the laboratory in accordance with American Public Health Association, "Standard Methods", Eleventh Edition. Tabulated values are analytical quantities reported in milligrams per liter (mg/l), which is equivalent to parts per million, computed values for milliequivalents (meq), and percent reactance values. The computations and tabulation are by computer processes.

Total Dissolved Solids. In some cases two values are reported. The upper number represents a summation of constituents; the lower is the result of a gravimetric analysis.

Total Hardness is assumed to represent the sum of the concentrations of calcium and magnesium ions, expressed as calcium carbonate, and is computed from the values for calcium and magnesium concentrations.

CODING

State Well Number

The state well numbering system used in this report is based on township, range, and section subdivision of the Public Land Survey. It is the system used in all ground water investigations and for numbering all wells for which data are published or filed by the Department of Water Resources. In this report the number of a well is referred to as the State Well Number. Under the system, each section is divided into 40-acre tracts lettered as follows:

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

Other Codes

Time. The time of sampling is Pacific Standard Time and expressed in military style.

Agency Codes. Agency coding is applicable for both the collecting and the laboratory agency. Only the laboratory agency is given in this tabulation. The numeral 5000 indicates the U. S. Geological Survey laboratory in Sacramento and the numeral 5050 indicates the Department of Water Resources' laboratory at Bryte.

Basin Index. The Basin Index numbers are listed under Index of Monitored Areas.

INDEX OF MONITORED AREAS

CENTRAL VALLEY REGION (NO. 5)

LAHONTAN REGION (NO. 6)

FIGURE E-1

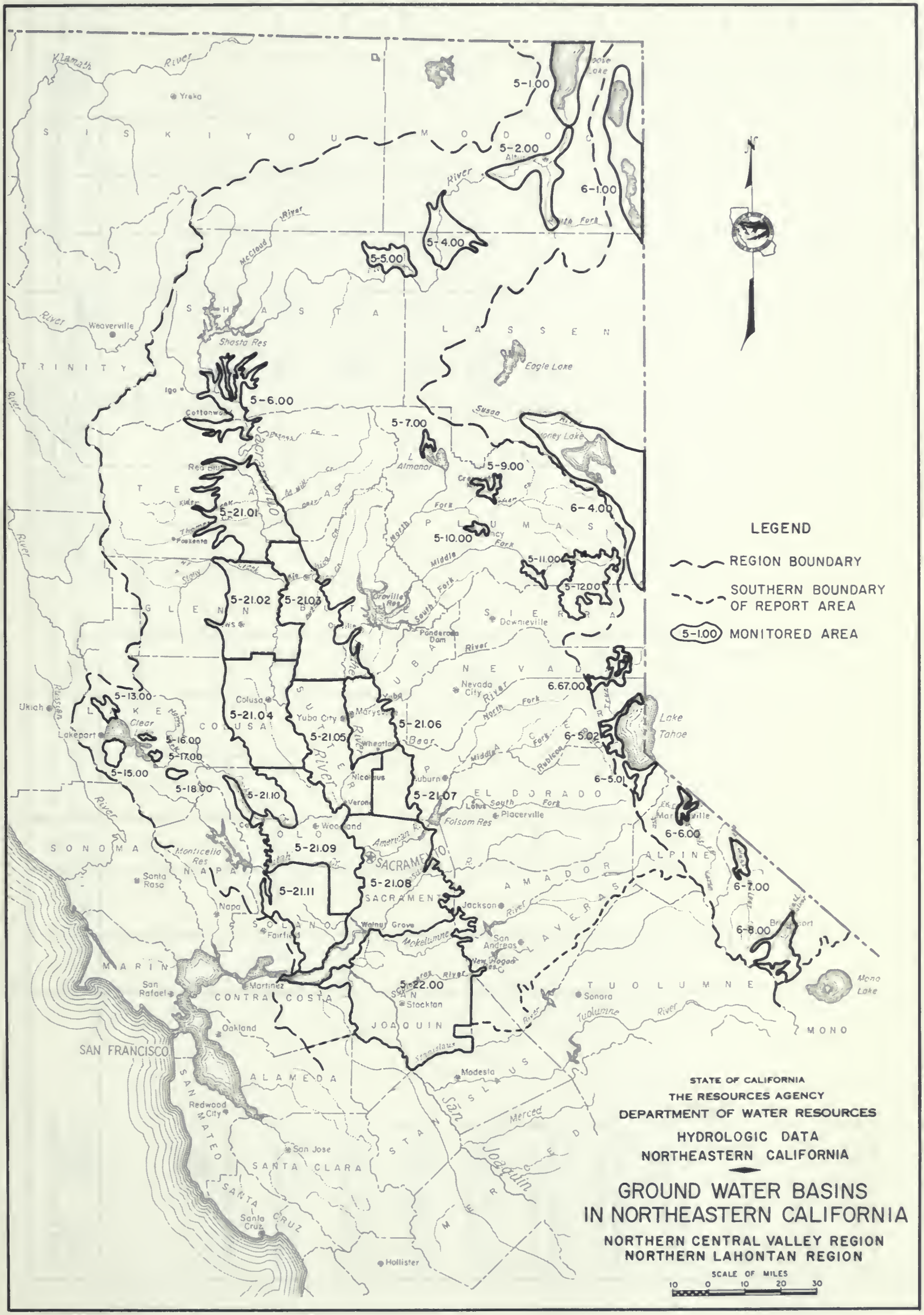

5-1.00
5-2.00
6-1.00
5-4.00
5-5.00
5-6.00
5-7.00
5-9.00
6-4.00
5-10.00
5-11.00
5-12.00
5-21.01
5-21.02
5-21.03
5-21.04
5-21.05
5-21.06
5-21.07
5-21.08
5-21.09
5-21.10
5-21.11
5-22.00
5-13.00
5-16.00
5-17.00
5-15.00
5-18.00
6.67.00
6-5.02
6-5.01
6-6.00
6-7.00
6-8.00
Klamath River
Yreka
Weaverville
Shasta Res
Eagle Lake
Igo
Cottonwood
Red Bluff
Oroville Res
Ponderosa Dam
Downieville
Nevada City
Lake Tahoe
Colusa
Yuba City
Marysville
Wheatland
Nicolaus
Auburn
Placerville
Folsom Res
Woodland
Jackson
Sutter Buttes
Clear Lake
Lakeport
Ukiah
Santa Rosa
Napa
Fairfield
Walnut Grove
San Andreas
New Hogan Res
Sonora
Mono Lake
Martinez
San Rafael
Oakland
San Francisco
Redwood City
San Jose
Santa Cruz
Hollister
Modesto
Stockton
Monticello Res
Sacramento River
Feather River
Yuba River
American River
Mokelumne River
Calaveras River
Stanislaus River
Tuolumne River
Merced River
San Joaquin River
SISKIYOU
MODOC
SHASTA
LASSEN
TRINITY
TEHAMA
GLENN
BUTTE
PLUMAS
SIERRA
COLUSA
SUTTER
YUBA
NEVADA
LAKE
EL DORADO
ALPINE
AMADOR
SACRAMENTO
SOLANO
NAPA
SONOMA
MARIN
CONTRA COSTA
ALAMEDA
SAN JOAQUIN
STANISLAUS
TUOLUMNE
CALAVERAS
MONO
SAN MATEO
SANTA CLARA
SANTA CRUZ
LEGEND
REGION BOUNDARY
SOUTHERN BOUNDARY OF REPORT AREA
5-1.00 MONITORED AREA
STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
HYDROLOGIC DATA
NORTHEASTERN CALIFORNIA
GROUND WATER BASINS
IN NORTHEASTERN CALIFORNIA
NORTHERN CENTRAL VALLEY REGION
NORTHERN LAHONTAN REGION
SCALE OF MILES
10 0 10 20 30

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME	LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
					CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
							CENTRAL VALLEY REGION				50000							
GOOSE LAKE VALLEY					50100													
48N/13E-20GC1	M	--	--	600	--	--	17	--	--	--	--	5.9	22	--	--	--	--	285
08/12/65	5050						.74					.17	.35					
48N/14E-23KC1	M	58.0F	--	235	--	--	16	--	--	--	--	1.9	17	--	--	--	--	88
08/12/65	5050						.70					.05	.27					
48N/14E-35AC1	M	--	--	167	--	--	8.4	--	--	--	--	0.4	7.4	--	--	--	--	69
08/11/65	5050						.37					.01	.12					
48N/14E-35A02	M	69.0F	--	714	--	--	150	--	--	--	--	92	--	4.0	4.3	--	--	14
08/12/65	5050						6.53					2.59						
47N/14E-02HC1	M	--	--	451	--	--	98	--	--	--	--	46	--	3.6	2.5	--	--	4
08/12/65	5050						4.26					1.30						
47N/14E-14B02	M	--	--	151	--	--	6.8	--	--	--	--	--	--	--	--	--	--	64
08/12/65	5050						.30											
46N/14E-32JC1	M	--	--	100	--	--	6.5	--	--	--	--	--	--	--	--	--	--	37
08/12/65	5050						.28											
45N/13E-12L01	M	--	--	310	--	--	54	--	--	--	--	--	--	--	--	--	--	46
08/12/65	5050						2.35											
45N/14E-32LC1	M	--	--	235	--	--	13	--	--	--	--	--	--	--	--	--	--	95
08/12/65	5050						.57											
44N/13E-36A01	M	--	--	185	--	--	25	--	--	--	--	--	--	--	--	--	--	41
08/12/65	5050						1.09											
44N/14E-07KC1	M	--	--	822	--	--	39	--	--	--	--	--	--	--	--	--	--	267
08/12/65	5050						1.70											

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME / LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
ALTURAS BASIN				50200													
42N/10E-29H01 M 08/12/65 5050	--	--	255	--	--	58 2.52	--	--	--	--	--	--	--	--	--	--	7
42N/11E-19E01 M 08/12/65 5050	--	--	440	--	--	99 4.31	--	--	--	--	--	--	--	--	--	--	7
42N/11E-24A01 M 08/12/65 5050	--	--	206	--	--	14 .61	--	--	--	--	--	--	--	--	--	--	68
42N/12E-11G01 M 08/12/65 5050	--	--	446	--	--	58 2.52	--	--	--	--	--	--	--	.6	--	--	86
42N/13E-31G01 M 08/12/65 5050	--	--	550	--	--	106 4.61	--	--	--	--	--	--	--	--	--	--	72
42N/13E-32G01 M 08/12/65 5050	--	--	342	--	--	29 1.26	--	--	--	--	--	--	--	--	--	--	123
41N/11E-02J01 M 08/12/65 5050	--	--	237	--	--	19 .83	--	--	--	--	--	--	--	--	--	--	61
41N/12E-15H01 M 08/12/65 5050	--	--	218	--	--	29 1.26	--	--	--	--	--	--	--	--	--	--	38
41N/13E-18P01 M 08/12/65 5050	--	--	973	98 4.89	65 5.41	--	--	--	--	311 6.47	--	--	--	--	--	--	515
40N/12E-11F01 M 08/12/65 5050	72.0F	--	164	--	--	22 .96	--	--	--	--	--	--	--	--	--	--	29
40N/12E-25J01 M 08/12/65 5050	--	--	466	--	--	72 3.13	--	--	--	--	--	--	--	--	--	--	95
39N/13E-06N01 M 08/12/65 5050	--	--	165	--	--	26 1.13	--	--	--	--	--	--	--	--	--	--	23

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME / LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
BIG VALLEY				50400														
39N/07E-13C01 M 08/25/65 5050 0915	--	--	213	-- --	--	32 1.39	--	--	--	--	--	--	--	--	--	--	--	37
39N/07E-14R01 M 08/25/65 5050 0930	--	8.5	2920	156 7.78 34	104 8.55 38	144 6.26 28	2.1 .05	16 .53 2	486 7.97 35	123 2.56 11	257 7.25 32	272 4.38 19	--	.1	--	1380 1312	815 390
39N/08E-26J01 M 08/25/65 5050 0815	58.0F	--	1080	92 4.59	35 2.93	64 2.78	--	--	--	72 1.50	56 1.58	239 3.85	--	--	--	--	376
39N/09E-28F20 M 08/24/65 5050 1530	--	--	194	--	--	18 .78	--	--	--	--	--	--	--	--	--	--	54
38N/07E-02P01 M 08/25/65 5050 1000	--	--	511	--	--	44 1.91	--	--	--	--	--	--	--	--	--	--	151
38N/07E-23D01 M 08/25/65 5050 1010	--	--	273	--	--	25 1.09	--	--	--	--	--	--	--	--	--	--	80
38N/08E-17K01 M 08/24/65 5050 1500	--	--	218	--	--	14 .61	--	--	--	--	--	--	--	--	--	--	79
38N/09E-21L01 M 08/24/65 5050 1515	--	--	332	--	--	52 2.26	--	--	--	--	--	--	--	--	--	--	56
37N/07E-13B01 M 08/24/65 5050 1430	--	--	241	--	--	20 .87	--	--	--	--	--	--	--	--	--	--	70
FALL RIVER VALLEY				50500														
38N/03E-24F01 M 08/23/65 5050 1510	--	--	148	--	--	4.1 .18	--	--	--	--	--	--	--	--	--	--	66	
38N/04E-27Q01 M 08/23/65 5050 1530	56.5F	8.2	167	12 .60 34	5.4 .44 25	15 .65 37	2.9 .07 4	0.0 .00	97 1.59 88	1.3 .03 2	6.0 .17 9	0.6 .01 1	--	.1	--	132 91	52 0

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME / LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
38N/04E-30F01 M 08/23/65 5050 1445	--	--	221	--	--	12 .52	--	--	--	--	--	--	--	--	--	--	82
38N/06E-31D01 M 08/24/65 5050 1040	60.0F	8.3	199	14 .70 36	9.0 .74 38	9.8 .43 22	2.4 .06 3	0.0 .00	108 1.77 95	0.2 .00	2.4 .07 4	1.5 .02 1	--	.0	--	144 92	72 0
37N/04E-01K01 M 08/23/65 5050 1615	--	--	907	--	--	94 4.09	--	--	--	--	0.0 .00	0.6 .01	--	--	--	--	261
37N/05E-14R01 M 08/24/65 5050 0815	--	--	188	--	--	40 1.74	--	--	--	--	--	--	--	--	--	--	5
37N/05E-19P02 M 08/24/65 5050 0715	64.0F	--	500	--	--	54 2.35	--	--	--	--	--	--	--	--	--	--	120
37N/05E-24FC1 M 08/24/65 5050 0900	58.0F	--	198	--	--	20 .87	--	--	--	--	--	--	--	--	--	--	53
37N/06E-19L01 M 08/24/65 5050 0930	--	--	194	--	--	10 .44	--	--	--	--	1.4 .04	14 .23	--	--	--	--	74
37N/06E-29B01 M 08/24/65 5050 0935	--	--	584	--	--	16 .70	--	--	--	--	18 .51	155 2.50	--	--	--	--	257
REDDING BASIN				50600													
32N/05W-26N01 M 08/23/65 5050 1400	66.0F	--	274	--	--	24 1.04	--	--	--	--	7.8 .22	--	--	--	--	--	83
32N/04W-14F02 M 08/23/65 5050 1235	63.0F	--	183	--	--	15 .65	--	--	--	--	7.6 .21	--	--	--	--	--	54
32N/04W-16BC2 M 08/23/65 5050 1300	74.0F	--	132	6.8 .34	3.6 .30	11 .48	--	--	--	--	--	--	--	--	--	--	32
32N/04W-34FC1 M 08/23/65 5050 1320	72.0F	--	318	--	--	38 1.65	--	--	--	--	--	--	--	--	--	--	72

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME / LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
32N/03W-17E02 M 08/23/65 5050 1222	72.0F	--	3450	--	--	682 29.67	--	--	--	--	908 25.61	--	--	13.0	--	1770	104
32N/03W-20P01 M 08/23/65 5050 1215	70.0F	--	213	16 .80	7.3 .60	14 .61	--	--	--	--	--	--	--	--	--	--	70
32N/03W-32J02 M 08/23/65 5050 1200	70.0F	--	347	24 1.20	12 1.00	28 1.22	--	--	--	--	--	--	--	--	--	--	110
32N/03W-35C01 M 08/23/65 5050 1140	68.0F	--	215	--	--	18 .78	--	--	--	--	--	--	--	--	--	--	70
31N/05W-13C01 M 08/23/65 5050 0805	72.0F	--	427	--	--	59 2.57	--	--	--	--	--	--	--	.3	--	--	69
31N/04W-07A01 M 08/23/65 5050 1400	78.0F	--	215	17 .85	9.1 .75	15 .65	--	--	--	--	--	--	--	--	--	--	80
31N/04W-15B01 M 08/23/65 5050 1330	70.0F	--	220	12 .60	9.9 .82	18 .78	--	--	--	--	--	--	--	--	--	--	71
31N/04W-16C01 M 08/23/65 5050 1345	65.0F	--	176	10 .50	9.7 .80	12 .52	--	--	--	--	--	--	--	--	--	--	65
31N/03W-12E01 M 08/23/65 5050 1125	71.0F	--	196	18 .90	7.8 .64	--	--	--	--	--	--	--	--	--	--	--	77
31N/03W-29P01 M 08/23/65 5050 1045	66.0F	--	220	16 .80	11 .92	9.8 .43	--	--	--	--	--	--	--	--	--	--	86
30N/05W-15R01 M 08/23/65 5050 0835	78.0F	--	187	11 .55	6.9 .57	16 .70	--	--	--	--	--	--	--	--	--	--	56
30N/05W-17R01 M 08/23/65 5050 0850	68.0F	--	147	--	--	15 .65	--	--	--	--	--	--	--	--	--	--	37
31N/05W-25K01 M 08/24/65 5050 0800	--	--	244	--	--	38 1.65	--	--	--	--	--	--	--	--	--	--	35

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME / LAB / SAMPLER	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
30N/04W-C1E01 M 08/23/65 5050 1030	68.0F	--	68	3.2 .16	1.9 .16	5.7 .25	--	--	--	--	--	--	--	--	--	--	16
30N/04W-16J01 M 08/23/65 5050 0920	72.0F	--	242	17 .85	13 1.07	12 .52	--	--	--	--	--	--	--	--	--	--	96
30N/03W-04MC1 M 08/23/65 5050 1000	68.0F	--	191	13 .65	11 .93	8.8 .38	--	--	--	--	--	--	--	--	--	--	79
30N/03W-34D01 M 08/23/65 5050 0945	74.0F	--	273	22 1.10	15 1.26	9.9 .43	--	--	--	--	--	--	--	--	--	--	118
29N/04W-02M01 M 08/23/65 5050 0930	78.0F	--	196	16 .80	6.0 .50	16 .70	--	--	--	--	--	--	--	--	--	--	65
LAKE ALMANOR VALLEY				50700													
28N/07E-05L01 M 08/09/65 5050	--	7.5	81	--	--	4.4 .19	--	0.0 .00	43 .71	--	1.4 .04	--	--	--	--	74	27 0
28N/07E-05N01 M 08/09/65 5050	--	8.1	92	--	--	5.1 .22	--	0.0 .00	52 .85	--	1.6 .05	--	--	--	--	80	33 0
28N/07E-07A01 M 08/09/65 5050	--	7.9	111	--	--	7.4 .32	--	0.0 .00	66 1.08	--	1.4 .04	--	--	--	--	80	41 0
28N/07E-07F01 M 08/09/65 5050	--	8.2	122	--	--	4.7 .20	--	0.0 .00	72 1.18	--	1.4 .04	--	--	--	--	88	49 0
28N/07E-18B01 M 08/09/65 5050	--	8.4	192	--	--	3.8 .17	--	2.5 .08	114 1.87	--	0.5 .01	--	--	--	--	123	91 0
28N/07E-18D01 M 08/09/65 5050	--	7.6	67	--	--	2.8 .12	--	0.0 .00	40 .66	--	0.8 .02	--	--	--	--	56	25 0
28N/07E-18M01 M 08/09/65 5050	--	8.6	232	--	--	9.3 .40	--	6.0 .20	135 2.21	--	1.7 .05	--	--	--	--	143	109 0

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME	LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
					CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
INDIAN VALLEY					50900													
27N/09E-35P01 M 08/10/65	S050	--	8.4	235	--	--	8.5 .37	--	3.0 .10	142 2.33	--	0.8 .02	--	--	--	--	144	106 0
26N/10E-04E01 M 08/10/65	S050	--	8.3	183	--	--	21 .91	--	0.0 .00	114 1.87 1	--	0.7 .02	--	--	--	--	126	53 0
26N/10E-06E01 M 08/10/65	S050	--	8.4	525	--	--	60 2.61	--	2.0 .07	109 1.79	--	89 2.51	--	--	--	--	288	101 8
26N/10E-16P01 M 08/10/65	S050	--	8.6	510	--	--	47 2.04	--	10 .33	193 3.17	--	34 .96	--	--	--	--	294	154 0
26N/10E-18M01 M 08/10/65	S050	--	8.4	233	--	--	8.2 .36	--	4.0 .13	138 2.26	--	0.0 .00	--	--	--	--	159	105 0
26N/10E-23H01 M 08/10/65	S050	--	7.8	203	--	--	4.6 .20	--	0.0 .00	115 1.89	--	0.3 .01	--	--	--	--	111	92 0
26N/10E-27R01 M 08/10/65	S050	--	8.0	99	--	--	4.8 .21	--	0.0 .00	53 .87	--	0.0 .00	--	--	--	--	71	35 0
AMERICAN VALLEY					51000													
24N/05E-02A01 M 08/10/65	S050	--	8.4	298	--	--	7.0 .30	--	4.0 .13	179 2.94	--	0.2 .01	--	--	--	--	162	146 0
24N/05E-10H01 M 08/10/65	S050	--	8.1	146	--	--	2.0 .09	--	0.0 .00	86 1.41	--	0.0 .00	--	--	--	--	85	69 0
24N/05E-16H01 M 08/10/65	S050	--	7.6	58	--	--	2.0 .09	--	0.0 .00	31 .51	--	0.0 .00	--	--	--	--	45	23 0
24N/10E-06N01 M 08/10/65	S050	--	8.3	381	--	--	24 1.04	--	0.0 .00	230 3.77	--	4.3 .12	--	--	--	--	212	146 0

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME / LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
24N/10E-08L01 M 08/10/65 SOSO	--	6.9	264	--	--	7.6 .33	--	0.0 .00	151 2.48	--	0.3 .01	--	--	--	--	157	121 0
24N/10E-18D01 M 08/10/65 SOSO	--	7.6	105	--	--	2.7 .12	--	0.0 .00	53 .87	--	0.6 .02	--	--	--	--	69	45 2
24N/10E-19B01 M 08/10/65 SOSO	--	7.5	95	--	--	1.5 .07	--	0.0 .00	50 .82	--	0.1 .00	--	--	--	--	60	44 3
24N/10E-19CC1 M 08/10/65 SOSO	--	8.1	127	--	--	3.2 .14	--	0.0 .00	71 1.16	--	0.0 .00	--	--	--	--	80	57 0
24N/10E-20D01 M 08/10/65 SOSO	--	7.2	46	--	--	2.0 .09	--	0.0 .00	22 .36	--	0.0 .00	--	--	--	--	36	17 0
MOHAWK VALLEY				51100													
22N/12E-09A01 M 08/18/65 SOSO	--	8.3	154	--	--	5.2 .23	--	0.0 .00	95 1.56 1	--	0.0 .00	--	--	--	--	123	65 0
22N/12E-09Q01 M 08/18/65 SOSO	--	7.0	276	--	--	14 .61	--	0.0 .00	115 1.89	--	0.0 .00	--	--	--	--	207	101 7
22N/13E-19N01 M 08/18/65 SOSO	--	8.2	244	--	--	18 .78	--	0.0 .00	141 2.31	--	0.7 .02	--	--	--	--	163	84 0
22N/13E-30R01 M 08/18/65 SOSO	--	7.0	391	--	--	44 1.91	--	0.0 .00	107 1.75	--	19 .54	--	--	--	--	264	78 0
SIERRA VALLEY				51200													
22N/14E-14F02 M 08/18/65 SOSO	--	8.2	158	14 .70 42	7.0 .58 35	7.8 .34 20	1.4 .04 2	0.0 .00	96 1.57 96	3.3 .07 4	0.0 .00	0.3 .00	--	.0	--	118 81	64 0
22N/15E-11F01 M 08/18/65 SOSO	--	7.9	352	40 2.00 65	8.8 .72 24	7.7 .33 11	0.2 .01	0.0 .00	61 1.00 36	9.2 .19 7	22 .62 23	58 .93 34	--	.0	--	276 176	136 86

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME	LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
					CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
22N/15E-12B01 M		--	7.0	220	3.6	3.9	24	5.4	0.0	67	3.4	1.4	33	--	.0	--	176	25
08/18/65	5050				.18	.32	1.04	.14	.00	1.10	.07	.04	.53				108	0
					11	19	62	8		63	4	2	30					
22N/15E-17C03 M		--	8.1	367	3.4	1.1	70	2.3	0.0	135	3.6	24	24	--	.9	--	282	13
08/18/65	5050				.17	.09	3.05	.06	.00	2.21	.07	.68	.39				195	0
					5	3	91	2		66	2	20	12					
22N/15E-26K02 M		--	8.5	2220	56	79	325	6.2	20	546	383	213	8.5	--	.1	--	1390	466
08/18/65	5050				2.79	6.49	14.14	.16	.67	8.95	7.97	6.01	.14				1358	0
					12	28	60	1	3	38	34	25	1					
22N/16E-05N02 M		--	8.2	172	26	0.2	9.8	2.7	0.0	97	8.7	2.8	2.3	--	.0	--	119	66
08/18/65	5050				1.30	.02	.43	.07	.00	1.59	.18	.08	.04				100	0
					71	1	24	4		84	10	4	2					
21N/14E-15J01 M		--	8.1	463	7.5	7.9	68	4.4	0.0	130	0.0	51	22	--	.1	--	314	51
08/18/65	5050				.37	.65	2.96	.11	.00	2.13	.00	1.44	.35				225	0
					9	16	72	3		54		37	9					
21N/14E-22L01 M		--	8.5	618	28	0.5	93	9.0	4.0	139	7.9	102	4.8	--	.9	--	344	72
08/18/65	5050				1.40	.04	4.05	.23	.13	2.28	.16	2.88	.08				318	0
					24	1	71	4	2	41	3	52	1					
21N/14E-29J01 M		--	8.1	228	19	13	8.0	0.8	0.0	148	2.8	0.0	0.1	--	.0	--	135	103
08/18/65	5050				.95	1.07	.35	.02	.00	2.43	.06	.00	.00				116	0
					40	45	15	1		98	2							
21N/14E-36K01 M		--	8.3	200	26	4.4	11	2.0	0.0	115	0.3	4.2	2.7	--	.0	--	133	83
08/18/65	5050				1.30	.36	.48	.05	.00	1.89	.01	.12	.04				107	0
					59	16	22	2		92		6	2					
21N/15E-05D01 M		--	8.3	1740	23	0.1	332	9.5	0.0	128	186	349	11	--	5.8	--	1040	58
08/18/65	5050				1.15	.01	14.44	.24	.00	2.10	3.87	9.84	.18				979	0
					7		91	2		13	24	62	1					
21N/15E-09Q03 M		--	8.3	239	23	0.4	26	4.9	0.0	121	13	1.9	4.4	--	.1	--	182	59
08/18/65	5050				1.15	.03	1.13	.13	.00	1.98	.27	.05	.07				133	0
					47	1	46	5		84	11	2	3					
20N/14E-04G02 M		--	8.4	238	21	12	9.2	3.2	3.0	145	4.1	0.0	0.3	--	.0	--	160	103
08/18/65	5050				1.05	.99	.40	.08	.10	2.38	.09	.00	.00				124	0
					42	39	16	3	4	93	4							
UPPER LAKE VALLEY					51300													
16N/09W-31L02 M		--	8.3	235	--	--	9.6	--	0.0	121	--	4.0	--	--	--	--	120	98
08/03/65	5050						.42		.00	1.98		.11						0

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME	LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
					CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
15N/10W-03C01	M	--	8.6	387	--	--	9.0	--	8.0	189	--	8.8	--	--	--	--	238	194
08/03/65	5050						.39		.27	3.10		.25						26
15N/10W-03J01	M	--	8.5	669	--	--	46	--	6.0	162	--	29	--	--	--	--	407	259
08/03/65	5050						2.00		.20	2.66		.82						116
15N/10W-10E01	M	--	7.5	358	--	--	18	--	0.0	157	--	7.6	--	--	--	--	207	144
08/03/65	5050						.78		.00	2.57		.21						16
15N/10W-12K02	M	--	7.7	174	--	--	7.4	--	0.0	101	--	3.8	--	--	--	--	76	73
08/03/65	5050						.32		.00	1.66		.11						0
15N/10W-24H01	M	--	8.6	451	--	--	30	--	10	226	--	21	--	--	--	--	245	183
08/03/65	5050						1.31		.33	3.71		.59						0
15N/09W-06F01	M	--	8.3	188	--	--	6.3	--	0.0	96	--	3.2	--	--	--	--	112	85
08/03/65	5050						.27		.00	1.57		.09						7
15N/09W-07B01	M	--	7.9	251	--	--	14	--	0.0	147	--	3.2	--	--	--	--	166	101
08/03/65	5050						.61		.00	2.41		.09						0
15N/09W-31P01	M	--	8.1	176	--	--	13	--	0.0	98	--	4.4	--	--	--	--	120	60
08/03/65	5050						.57		.00	1.61		.12						0
KELSEYVILLE VALLEY					51500													
14N/09W-32J01	M	--	7.8	812	--	--	19	--	0.0	487	--	20	--	--	--	--	462	424
08/03/65	5050						.83		.00	7.99		.56						25
14N/09W-32J02	M	--	8.5	536	--	--	13	--	9.0	318	--	8.7	--	--	--	--	329	279
08/03/65	5050						.57		.30	5.22		.25						3
13N/09W-02G01	M	--	8.6	700	--	--	11	--	26	351	--	14	--	--	--	--	420	388
08/04/65	5050						.48		.87	5.76		.39						57
13N/09W-03C01	M	--	8.1	404	--	--	7.0	--	0.0	230	--	6.1	--	--	--	--	219	207
08/03/65	5050						.30		.00	3.77		.17						19

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME / LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
13N/C9W-08B01 M 08/03/65 5050	--	8.8	558	--	--	11 .48	--	23 .77	271 4.44	--	8.4 .24	--	--	--	--	330	301 41
13N/C9W-C8N02 M 08/03/65 5050	--	8.5	293	--	--	13 .57	--	5.0 .17	153 2.51	--	7.8 .22	--	--	--	--	165	126 0
13N/09W-12M01 M 08/03/65 5050	--	8.6	455	--	--	16 .70	--	13 .43	249 4.08	--	18 .51	--	--	--	--	284	214 0
13N/C9W-17DC1 M 08/03/65 5050	--	8.9	967	--	--	27 1.17	--	66 2.20	590 9.68 1	--	12 .34	--	--	--	--	617	565 0
HIGH VALLEY				51600													
14N/C8W-23KC1 M 08/04/65 5050	--	7.5	302	--	--	22 .96	--	0.0 .00	134 2.20	--	16 .45	--	--	--	--	161	98 0
14N/C8W-24B02 M 08/04/65 5050	--	8.4	298	--	--	31 1.35	--	4.0 .13	159 2.61	--	3.9 .11	--	--	--	--	162	89 0
14N/C8W-24H01 M 08/03/65 5050	--	7.2	884	--	--	56 2.44	--	0.0 .00	570 9.35 1	--	8.1 .23	--	--	--	--	540	392 0
14N/C8W-24LC1 M 08/04/65 5050	--	6.7	1120	--	--	67 2.91	--	0.0 .00	747 12.25 1	--	11 .31	--	--	--	--	650	486 0
BURNS VALLEY				51700													
13N/C7W-15NC1 M 08/04/65 5050	--	8.2	285	--	--	32 1.39	--	0.0 .00	162 2.66	--	6.0 .17	--	--	--	--	184	79 0
13N/C7W-21BC1 M 08/04/65 5050	--	8.0	220	--	--	11 .48	--	0.0 .00	93 1.53	--	6.5 .18	--	--	--	--	126	87 11
13N/C7W-21JC1 M 08/04/65 5050	--	8.3	643	--	--	30 1.31	--	0.0 .00	410 6.72 1	--	14 .39	--	--	--	--	397	299 0

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME / LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
COYOTE VALLEY				51800													
11N/C7W-33JC2 M 08/04/65 5050	--	8.1	206	--	--	4.8 .21	--	0.0 .00	116 1.90	--	2.6 .07	--	--	--	--	109	97 2
11N/C7W-35E01 M 08/04/65 5050	--	8.6	311	--	--	14 .61	--	8.0 .27	166 2.72	--	6.1 .17	--	--	--	--	182	138 0
11N/C6W-19P02 M 08/04/65 5050	--	8.4	436	--	--	5.1 .22	--	4.0 .13	269 4.41 1	--	4.8 .14	--	--	--	--	239	241 14
10N/C7W-03L04 M 08/04/65 5050	--	8.5	279	--	--	6.0 .26	--	7.0 .23	146 2.39	--	3.3 .09	--	--	--	--	152	136 5
10N/C7W-03M01 M 08/04/65 5050	--	8.5	231	--	--	8.8 .38	--	6.0 .20	118 1.94	--	5.3 .15	--	--	--	--	172	102 0
SACRAMENTO VALLEY				52100													
TEHAMA COUNTY					52101												
27N/C4W-01HC2 M 08/03/65 5050	70.0F	--	232	19 .95	9.1 .75	15 .65	--	--	--	--	--	--	--	--	--	--	85
27N/C3W-10QC1 M 08/03/65 5050	73.0F	--	292	--	--	35 1.52	-	--	--	--	--	--	--	--	--	--	64
27N/C3W-15C01 M 08/03/65 5050	70.0F	--	282	25 1.25	12 1.01	12 .52	--	--	--	--	--	--	--	--	--	--	113
27N/C3W-19A01 M 08/03/65 5050	68.0F	--	230	21 1.05	7.6 .63	14 .61	--	--	--	--	--	--	--	--	--	--	84
26N/C4W-10D01 M 08/03/65 5050	70.0F	--	367	30 1.50	18 1.50	23 1.00	--	--	--	--	--	--	--	--	--	--	150
26N/03W-03N01 M 08/03/65 5050	78.0F	--	321	28 1.40	15 1.26	13 .57	--	--	--	--	--	--	--	--	--	--	133

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME	LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
					CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
26N/03W-22G01 M		68.0F	--	218	16	8.0	16	--	--	--	--	--	--	--	--	--	--	73
08/03/65	5050				.80	.66	.70											
26N/03W-29E01 M		--	--	208	11	11	12	--	--	--	--	--	--	--	--	--	--	74
08/03/65	5050				.55	.93	.52											
25N/03W-03N01 M		--	--	376	26	21	20	--	--	--	--	--	--	--	--	--	--	155
08/03/65	5050				1.30	1.80	.87											
25N/03W-31R01 M		76.0F	--	448	55	22	9.2	--	--	--	--	--	--	--	--	--	--	228
08/02/65	5050				2.74	1.81	.40											
25N/02W-04M01 M		68.0F	--	268	22	12	11	--	--	--	--	--	--	--	.4	--	--	108
08/03/65	5050				1.10	1.06	.48											
25N/02W-07K01 M		66.0F	--	572	45	38	20	--	--	--	--	--	--	--	--	--	--	272
08/03/65	5050				2.25	3.19	.87											
24N/05W-21L01 M		68.0F	--	336	25	9.6	29	--	--	--	--	--	--	--	--	--	--	102
08/03/65	5050				1.25	.79	1.26											
24N/03W-03P01 M		70.0F	--	286	29	12	11	--	--	--	--	--	--	--	--	--	--	123
08/02/65	5050				1.45	1.01	.48											
24N/03W-04K01 M		--	--	352	37	16	8.5	--	--	--	--	--	--	--	--	--	--	161
08/02/65	5050				1.85	1.37	.37											
24N/03W-14M01 M		70.0F	--	259	24	11	13	--	--	--	--	--	--	--	--	--	--	107
08/02/65	5050				1.20	.94	.57											
24N/03W-20N01 M		68.0F	--	179	12	7.7	13	--	--	--	--	--	--	--	--	--	--	62
08/02/65	5050				.60	.64	.57											
24N/02W-30C01 M		70.0F	--	477	35	27	26	--	--	--	--	--	--	--	--	--	--	202
08/02/65	5050				1.75	2.29	1.13											
23N/03W-22D01 M		73.0F	--	328	26	14	20	--	--	--	--	--	--	--	--	--	--	124
08/02/65	5050				1.30	1.18	.87											

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME / LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
23N/03W-35B01 M 08/02/65 5050	70.0F	--	222	17 .85	7.9 .65	14 .61	--	--	--	--	--	--	--	--	--	--	75
23N/02W-05A01 M 08/02/65 5050	70.0F	--	333	21 1.05	15 1.27	27 1.17	--	--	--	--	--	--	--	--	--	--	116
23N/01W-09L01 M 07/30/65 5050 0220	--	8.3	445	52 2.59 58	17 1.40 32	9.7 .42 9	1.2 .03 1	0.0 .00	195 3.20 72	16 .33 7	5.2 .15 3	48 .77 17	--	.0	--	307 245	198 38
GLENN COUNTY						52102											
22N/04W-10B01 M 08/03/65 5050	--	--	545	51 2.54	30 2.51	--	--	--	--	--	--	--	--	--	--	--	253
22N/03W-04G01 M 08/03/65 5050	--	--	470	57 2.84	18 1.49	--	--	--	--	--	--	--	--	--	--	--	217
22N/03W-22Q01 M 08/04/65 5050	72.0F	--	436	52 2.59	13 1.12	--	--	--	--	--	--	--	--	--	--	--	186
22N/03W-25B01 M 08/03/65 5050	68.0F	--	377	40 2.00	15 1.23	20 .87	--	--	--	--	21 .59	7.5 .12	--	--	--	--	163
22N/02W-03A01 M 08/03/65 5050	--	--	512	49 2.45	22 1.81	27 1.17	--	--	--	--	35 .99	34 .55	--	--	--	--	211
22N/02W-26B01 M 08/03/65 5050	68.0F	--	408	44 2.20	15 1.30	19 .83	--	--	--	--	--	--	--	--	--	--	175
22N/01W-29C01 M 08/04/65 5050	72.0F	--	490	44 2.20	20 1.66	--	--	--	--	--	--	11 .18	--	--	--	--	193
21N/03W-02C01 M 08/03/65 5050	--	--	497	55 2.74	23 1.89	22 .96	--	--	--	--	28 .79	3.0 .05	--	--	--	--	232
21N/03W-14F01 M 08/04/65 5050	76.0F	--	377	32 1.60	18 1.48	22 .96	--	--	--	--	--	--	--	--	--	--	154

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME / LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
21N/C3W-20D01 M 08/06/65 S050	71.0F	--	338	22 1.10	14 1.16	27 1.17	--	--	--	--	--	--	--	--	--	--	113
21N/C2W-02D01 M 08/03/65 S050	74.0F	--	594	70 3.49	28 2.30	24 1.04	--	--	--	--	26 .73	8.7 .14	--	--	--	--	292
21N/C2W-15C01 M 08/06/65 S050	70.0F	--	511	58 2.89	23 1.89	21 .91	--	--	--	--	33 .93	14 .23	--	--	--	--	239
20N/C4W-C2Q01 M 08/06/65 S050	--	--	335	30 1.50	19 1.56	14 .61	--	--	--	--	6.3 .18	18 .29	--	--	--	--	152
20N/C3W-C2D01 M 08/04/65 S050	70.0F	--	426	46 2.30	19 1.56	--	--	--	--	--	--	--	--	--	--	--	193
20N/C2W-11G01 M 08/04/65 S050	--	--	399	39 1.95	19 1.61	18 .78	--	--	--	--	--	--	--	--	--	--	178
20N/C2W-13G01 M 08/04/65 S050	--	--	446	41 2.05	27 2.23	18 .78	--	--	--	--	--	--	--	--	--	--	214
19N/C3W-09J01 M 08/05/65 S050	--	--	496	--	--	51 2.22	--	--	--	--	--	--	--	--	--	--	172
19N/C3W-18P01 M 08/05/65 S050	--	--	605	44 2.20	23 1.92	57 2.48	--	--	--	--	--	--	--	--	--	--	206
19N/C2W-06G01 M 08/03/65 S050	--	--	326	32 1.60	16 1.34	--	--	--	--	--	--	--	--	--	--	--	147
19N/C2W-23N01 M 08/05/65 S050	--	--	694	46 2.30	47 3.92	48 2.09	--	--	--	--	--	--	--	--	--	--	311
18N/C4W-02F01 M 08/05/65 S050	--	--	1030	66 3.29	44 3.62	90 3.92	--	--	--	--	118 3.33	60 .97	--	--	--	--	348
18N/C3W-10K01 M 08/05/65 S050	78.0F	--	526	--	--	56 2.44	--	--	--	--	--	--	--	--	--	--	153

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME	LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
					CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
18N/02W-01E01 M		--	--	390	27	20	29	--	--	--	--	--	--	--	--	--	--	150
08/05/65	5050				1.35	1.65	1.26											
18N/02W-07F01 M		71.0F	--	588	33	29	51	--	--	--	59	--	--	--	--	--	--	204
08/05/65	5050				1.65	2.43	2.22				1.23							
BUTTE COUNTY							52103											
22N/01E-09M01 M		--	8.5	575	73	20	16	1.1	10	272	9.7	16	36	--	.0	--	339	266
07/30/65	5050				3.64	1.64	.70	.03	.33	4.46	.20	.45	.58				315	27
					61	27	12		5	74	3	7	10					
22N/02E-18J01 M		--	8.3	233	22	8.8	12	1.0	0.0	121	2.0	9.4	4.0	--	.1	--	150	91
07/30/65	5050				1.10	.72	.52	.03	.00	1.98	.04	.27	.06				119	0
					46	30	22	1		84	2	11	3					
21N/01E-26C01 M		--	8.0	492	90	1.1	18	1.7	16	267	7.9	6.6	4.7	--	.0	--	282	229
08/03/65	5050				4.49	.09	.78	.04	.53	4.38	.16	.19	.08				277	0
1600					83	2	14	1	10	82	3	4	1					
21N/03E-10Q01 M		--	8.6	2590	46	1.9	515	3.6	10	140	696	269	4.9	--	5.3	--	1610	123
07/30/65	5050				2.30	.16	22.40	.09	.33	2.30	14.48	7.59	.08				1620	0
1600					9	1	90		1	9	58	31						
20N/02E-29R01 M		--	8.7	550	90	1.8	22	1.7	13	208	13	46	4.3	--	.0	--	320	232
08/04/65	5050				4.49	.15	.96	.04	.43	3.41	.27	1.30	.07				294	40
1100					80	3	17	1	8	62	5	24	1					
20N/03E-15H01 M		--	7.8	157	21	3.8	4.2	2.1	0.0	90	2.5	2.4	0.4	--	.0	--	108	68
07/30/65	5050				1.05	.31	.18	.05	.00	1.48	.05	.07	.01				81	0
					66	19	11	3		92	3	4	1					
19N/02E-16R01 M		--	7.9	219	23	7.2	9.0	1.0	0.0	116	1.8	8.5	3.9	--	.0	--	152	87
09/03/65	5050				1.15	.59	.39	.03	.00	1.90	.04	.24	.06				111	0
1500					53	27	18	1		85	2	11	3					
19N/03E-36BC1 M		--	8.6	424	37	15	28	1.5	14	196	13	14	4.7	--	.6	--	245	153
09/03/65	5050				1.85	1.23	1.22	.04	.47	3.21	.27	.39	.08				224	0
1430					43	28	28	1	11	73	6	9	2					
19N/04E-06P01 M		--	8.7	313	33	9.6	20	0.8	10	156	4.3	6.6	6.6	--	.0	--	215	122
07/30/65	5050				1.65	.79	.87	.02	.33	2.56	.09	.19	.11				167	0
1630					50	24	26	1	10	78	3	6	3					
18N/02E-12B01 M		--	8.6	480	85	1.7	19	0.8	14	246	8.2	11	5.0	--	.0	--	276	219
08/03/65	5050				4.24	.14	.83	.02	.47	4.03	.17	.31	.08				255	0
1600					81	3	16		9	80	3	6	2					

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME / LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
18N/03E-33N01 M 08/03/65 5050 1415	--	8.5	258	26 1.30 47	11 .90 33	11 .48 17	2.8 .07 3	8.0 .27 10	140 2.30 85	2.1 .04 1	3.3 .09 3	0.2 .00	--	.0	--	178 133	109 0
18N/04E-07A01 M 09/03/65 5050 1430	--	8.3	151	20 1.00 65	1.2 .10 6	9.6 .42 27	0.7 .02 1	0.0 .00	72 1.18 82	2.1 .04 3	4.7 .13 9	5.4 .09 6	--	.0	--	136 79	55 0
18N/04E-28M01 M 09/03/65 5050 1430	--	8.3	257	36 1.80 66	6.6 .54 20	7.7 .33 12	1.5 .04 1	0.0 .00	156 2.56 96	0.2 .00	2.8 .08 3	2.0 .03 1	--	.0	--	182 133	117 0
17N/01E-01R01 M 09/03/65 5050 1350	--	8.6	528	51 2.54 45	21 1.73 30	31 1.35 24	2.7 .07 1	20 .67 12	263 4.31 76	3.1 .06 1	18 .51 9	5.3 .09 2	--	.1	--	280 281	212 0
17N/03E-18G01 M 08/03/65 5050 1645	--	8.8	703	88 4.39 54	33 2.71 33	24 1.04 13	1.0 .03	42 1.40 17	396 6.49 80	4.4 .09 1	2.8 .08 1	4.8 .08 1	--	.0	--	381 394	357 0
17N/03E-26C01 M 08/05/65 5050 1500	--	7.5	647	57 2.84 39	41 3.37 46	23 1.00 14	1.7 .04 1	0.0 .00	317 5.20 74	35 .73 10	23 .65 9	28 .45 6	--	.0	--	400 364	310 50
COLUSA COUNTY 52104																	
17N/03W-33R01 M 08/27/65 5050 1315	--	8.4	942	40 2.00 21	32 2.63 28	112 4.87 51	1.4 .04	4.0 .13 1	307 5.03 52	99 2.06 21	83 2.34 24	2.7 .04	--	.3	--	555 525	230 0
17N/02W-12C01 M 08/27/65 5050 1300	--	8.6	472	37 1.85 37	21 1.73 34	33 1.44 29	1.1 .03 1	12 .40 8	253 4.15 81	4.6 .10 2	16 .45 9	1.1 .02	--	.1	--	261 250	178 0
16N/03W-09N01 M 08/27/65 5050 1330	--	8.4	626	40 2.00 33	20 1.64 27	56 2.44 40	0.6 .02	7.0 .23 4	228 3.74 63	6.4 .13 2	65 1.83 31	1.2 .02	--	.2	--	309 308	183 0
16N/02W-04H01 M 08/27/65 5050 1400	--	8.7	620	37 1.85 30	28 2.30 37	46 2.00 32	1.6 .04 1	12 .40 6	202 3.31 53	65 1.35 22	38 1.07 17	3.6 .06 1	--	.0	--	329 330	207 22
16N/02W-25B02 M 11/22/65 5050 1015	--	8.3	1380	61 3.04 19	52 4.27 27	192 8.35 53	2.9 .07	0.0 .00	777 12.74 80	87 1.81 11	37 1.04 7	20 .32 2	--	.2	--	877 833	367 0
16N/02W-35B01 M 08/23/65 5050 1100	--	8.7	738	21 1.05 14	23 1.89 25	103 4.48 60	1.4 .04 1	16 .53 7	245 4.02 53	82 1.71 23	45 1.27 17	1.3 .02	--	.2	--	427 413	146 0

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME / LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
16N/01W-29J01 M	--	8.1	401	26	18	31	0.7	0.0	233	0.0	8.6	0.0	--	.1	--	184	139
08/27/65 5050				1.30	1.48	1.35	.02	.00	3.82	.00	.24	.00				199	0
1030				31	36	33			94		6						
15N/04W-25P01 M	--	8.7	1030	43	28	139	1.4	26	287	101	98	2.2	--	.4	--	552	221
09/15/65 5050				2.15	2.30	6.05	.04	.87	4.71	2.10	2.76	.04				580	0
1445				20	22	57		8	45	20	26						
15N/02W-32R01 M	--	8.3	648	40	25	60	0.6	0.0	283	42	31	13	0.4	.1	--	350	202
08/23/65 5050				2.00	2.06	2.61	.02	.00	4.64	.87	.87	.21				351	0
1040				30	31	39			70	13	13	3					
14N/02W-12HC2 M	--	8.7	649	45	26	50	2.3	14	262	19	45	1.8	--	.2	--	349	217
08/23/65 5050				2.25	2.14	2.18	.06	.47	4.30	.40	1.27	.03				332	0
1020				34	32	33	1	7	66	6	20						
14N/02W-29J01 M	--	8.4	265	14	13	21	1.1	3.0	127	2.3	8.3	14	--	.0	--	148	89
09/15/65 5050				.70	1.07	.91	.03	.10	2.08	.05	.23	.23				139	0
1600				26	39	34	1	4	77	2	9	9					
14N/02W-35P01 M	--	8.0	586	29	24	47	1.4	0.0	206	9.0	68	5.2	--	.5	--	286	173
08/23/65 5050				1.45	1.97	2.04	.04	.00	3.38	.19	1.92	.08				285	4
1000				26	36	37	1		61	3	34	1					
14N/01W-02C01 M	--	8.5	948	57	30	82	2.5	4.0	216	79	132	0.7	--	.2	--	543	268
09/16/65 5050				2.84	2.47	3.57	.06	.13	3.54	1.64	3.72	.01				493	85
1430				32	28	40	1	1	39	18	41						
14N/01W-12A01 M	--	8.7	615	21	1.1	110	1.5	10	249	0.8	52	0.3	--	.5	--	360	57
08/26/65 5050				1.05	.09	4.79	.04	.33	4.08	.02	1.47	.00				319	0
0800				18	2	80	1	6	69		25						
14N/01W-31Q01 M	--	8.6	556	46	12	42	1.0	8.0	150	4.6	73	8.1	--	.4	--	295	165
08/23/00 5050				2.30	.99	1.83	.03	.27	2.46	.10	2.06	.13				269	29
0930				45	19	36	1	5	49	2	41	3					
14N/01E-18A01 M	--	8.7	469	20	6.8	74	1.2	10	219	12	18	0.5	--	.2	--	266	78
09/16/65 5050				1.00	.56	3.22	.03	.33	3.59	.25	.51	.01				250	0
1400				21	12	67	1	7	77	5	11						
13N/02W-26A01 M	--	8.5	652	96	2.6	44	1.5	8.0	241	6.4	74	18	--	.4	--	370	250
10/18/65 5050				4.79	.21	1.91	.04	.27	3.95	.13	2.09	.29				369	39
1230				69	3	27	1	4	59	2	31	4					
13N/01W-15R02 M	--	8.3	549	36	15	53	2.2	0.0	246	10	38	9.0	--	.5	--	287	153
09/16/65 5050				1.80	1.23	2.31	.06	.00	4.03	.21	1.07	.14				284	0
1230				33	23	43	1		74	4	20	3					
13N/01W-36Q02 M	--	8.3	346	35	14	38	2.7	0.0	202	7.1	35	3.4	--	.3	--	276	145
09/16/65 5050				1.75	1.15	1.65	.07	.00	3.31	.15	.99	.05				234	0
1300				38	25	36	2		74	3	22	1					

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME / LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
13N/01E-22J01 M 09/16/65 5050 1330	--	8.4	558	57 2.84 52	18 1.48 27	23 1.00 18	4.0 .10 2	2.0 .07 1	222 3.64 68	8.2 .17 3	51 1.44 27	0.9 .01	--	.1	--	327 273	216 31
SUTTER COUNTY						52105											
16N/03E-04E01 M 07/27/65 5050 0930	--	8.5	299	23 1.15 37	16 1.32 43	14 .61 20	0.8 .02 1	5.0 .17 6	118 1.94 63	27 .56 18	3.3 .09 3	19 .31 10	--	.0	--	220 166	124 19
15N/01E-16RC1 M 07/29/65 5050 1100	--	8.5	607	38 1.90 27	46 3.78 55	27 1.17 17	2.3 .06 1	9.0 .30 4	338 5.54 81	17 .35 5	22 .62 9	3.9 .06 1	--	.1	--	355 331	283 0
15N/01E-35R01 M 07/21/65 5050 1000	--	8.6	750	77 3.84 47	43 3.53 44	16 .70 9	1.2 .03	10 .33 4	302 4.95 62	30 .62 8	74 2.09 26	0.7 .01	--	.0	--	466 400	370 106
15N/02E-26D02 M 07/20/65 5050 1200	--	8.0	743	65 3.24 41	34 2.79 35	43 1.87 24	1.3 .03	0.0 .00	319 5.23 67	21 .44 6	49 1.38 18	44 .71 9	--	.1	--	447 414	304 43
15N/03E-04C02 M 07/19/65 5050 1030	--	8.4	806	61 3.04 34	55 4.52 51	29 1.26 14	2.2 .06 1	7.0 .23 3	335 5.49 61	85 1.77 20	27 .76 8	48 .77 9	--	.1	--	568 478	379 93
15N/03E-15C01 M 07/19/65 5050	--	8.6	387	23 1.15 28	7.9 .65 16	50 2.18 54	3.4 .09 2	10 .33 8	199 3.26 79	0.5 .01	18 .51 12	0.6 .01	--	.3	--	257 211	90 0
15N/03E-23C01 M 07/19/65 5050	--	8.2	152	15 .75 46	7.9 .65 40	4.7 .20 12	0.9 .02 1	0.0 .00	86 1.41 92	2.5 .05 3	2.5 .07 5	0.7 .01 1	--	.0	--	99 76	70 0
15N/03E-26M01 M 07/26/65 5050 1630	--	8.6	403	29 1.45 33	15 1.23 28	39 1.70 38	2.7 .07 2	10 .33 7	222 3.64 82	4.8 .10 2	13 .37 8	0.8 .01	--	.2	--	241 223	134 0
15N/03E-29G01 M 07/26/65 5050 1315	--	8.6	755	62 3.09 34	52 4.27 47	37 1.61 18	1.5 .04	20 .67 8	398 6.53 74	36 .75 8	16 .45 5	28 .45 5	--	.0	--	488 448	367 7
14N/01E-01A01 M 07/21/65 5050 1030	--	8.3	617	65 3.24 46	32 2.63 37	28 1.22 17	1.1 .03	0.0 .00	369 6.05 87	18 .37 5	16 .45 7	3.2 .05 1	--	.0	--	315 344	294 0
14N/01E-24N01 M 07/02/65 5050 1100	--	8.6	423	32 1.60 34	21 1.73 36	32 1.39 29	1.3 .03 1	10 .33 7	223 3.66 79	21 .44 10	6.7 .19 4	0.5 .01	--	.1	--	248 234	166 0

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME / LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
14N/03E-03C02 M 07/30/65 5050 1300	--	8.7	1000	42 2.10 20	66 5.43 53	62 2.70 26	4.1 .10 1	19 .63 6	228 3.74 37	67 1.39 14	156 4.40 43	0.8 .01	--	.2	--	614 529	379 161
14N/03E-05A03 M 07/22/65 5050 1400	--	8.5	1120	88 4.39 35	63 5.18 41	71 3.09 24	1.8 .05	16 .53 4	474 7.77 62	100 2.08 17	75 2.12 17	3.3 .05	--	.1	--	670 650	481 66
14N/03E-14E02 M 07/28/65 5050 0900	--	8.4	228	22 1.10 45	13 1.07 43	6.0 .26 11	1.2 .03 1	4.0 .13 5	129 2.12 86	4.8 .10 4	3.4 .10 4	0.5 .01	--	.0	--	111 118	108 0
14N/03E-16B02 M 07/21/65 5050 1300	--	8.3	1430	82 4.09 29	87 7.15 51	63 2.74 19	3.0 .08 1	0.0 .00	255 4.18 30	77 1.60 11	292 8.23 59	0.7 .01	--	.1	--	895 730	564 355
14N/03E-18A02 M 07/21/65 5050 1700	--	8.5	700	54 2.69 35	40 3.29 43	38 1.65 22	1.7 .04 1	12 .40 5	365 5.99 76	28 .58 7	32 .90 11	0.6 .01	--	.1	--	396 385	301 0
14N/03E-23M02 M 07/26/65 5050 1600	--	8.6	298	27 1.35 42	13 1.07 34	17 .74 23	1.2 .03 1	8.0 .27 9	143 2.35 75	18 .37 12	4.3 .12 4	0.4 .01	--	.1	--	192 159	120 0
13N/03E-10M02 M 07/20/65 5050 1100	--	8.3	913	91 4.54 47	39 3.21 33	43 1.87 19	1.1 .03	0.0 .00	351 5.76 60	24 .50 5	120 3.38 35	1.3 .02	--	.0	--	569 491	387 99
13N/04E-21A01 M 07/20/65 5050 0945	--	8.3	877	72 3.59 36	64 5.26 53	23 1.00 10	1.7 .04	0.0 .00	263 4.31 43	262 5.45 54	9.9 .28 3	3.6 .06 1	--	.0	--	647 565	445 230
12N/02E-09B02 M 07/26/65 5050 1030	--	8.7	643	27 1.35 21	0.4 .03	118 5.13 78	1.7 .04 1	12 .40 6	237 3.89 61	16 .33 5	62 1.75 27	0.7 .01	--	.5	--	402 354	69 0
12N/02E-11N01 M 07/26/65 5050 1000	--	8.6	1280	31 1.55 13	14 1.15 9	220 9.57 77	5.1 .13 1	12 .40 3	240 3.94 33	0.0 .00	270 7.61 63	2.2 .04	--	.9	--	728 673	135 0
12N/02E-14B01 M 07/26/65 5050 0930	--	8.6	4310	152 7.58 18	112 9.21 22	565 24.58 59	2.6 .07	9.0 .30 1	172 2.82 7	0.0 .00	1370 38.63 93	0.4 .01	--	.8	--	2790 2296	841 686
12N/02E-16R01 M 07/26/65 5050 1015	--	8.9	979	45 2.25 22	8.8 .72 7	169 7.35 70	4.3 .11 1	37 1.23 12	360 5.90 58	17 .35 3	95 2.68 26	0.7 .01	--	.6	--	577 554	148 0
12N/02E-23Q01 M 07/26/65 5050 1115	--	8.6	957	23 1.15 12	6.7 .55 6	178 7.74 8	3.2 .08 1	12 .40 4	250 4.10 44	0.6 .01	170 4.79 51	2.4 .04	--	.7	--	571 519	85 0

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME / LAB / SAMPLER	TEMP	LAB-PH FLD-PH	EC LAB FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
12N/02E-26A01 M 07/26/65 5050 1100	--	8.7	1070	28 1.40 13	8.8 .72 7	192 8.35 79	2.3 .06 1	17 .57 5	248 4.07 39	0.0 .00	203 5.72 55	2.2 .04	--	.6	--	608 575	106 0
12N/03E-26R01 M 07/20/65 5050 1030	--	8.5	734	60 2.99 42	20 1.64 23	55 2.39 34	2.6 .07 1	8.0 .27 4	198 3.25 45	8.2 .17 2	126 3.55 49	0.8 .01	--	.1	--	423 378	234 58
11N/04E-09CC1 M 07/20/65 5050 1000	--	8.6	298	28 1.40 42	16 1.32 40	13 .57 17	1.2 .03 1	8.0 .27 8	142 2.33 68	24 .50 15	11 .31 9	0.7 .01	--	.1	--	184 172	138 8
YUBA COUNTY					52106												
16N/03E-11N01 M 07/13/65 5050 1030	--	8.6	1320	95 4.74 39	31 2.55 21	108 4.70 39	3.8 .10 1	10 .33 3	154 2.53 21	7.9 .16 1	325 9.17 75	1.4 .02	--	.5	--	952 658	366 223
16N/03E-23B01 M 07/13/65 5050 1136	--	8.5	286	21 1.05 34	18 1.48 48	12 .52 17	1.5 .04 1	6.0 .20 7	136 2.23 74	10 .21 7	8.7 .25 8	8.1 .13 4	--	.0	--	187 152	127 6
16N/03E-26G01 M 07/13/65 5050 1147	--	8.6	284	28 1.40 46	9.7 .80 26	18 .78 26	2.5 .06 2	10 .33 11	126 2.07 70	8.2 .17 6	13 .37 13	0.4 .01	--	.1	--	218 152	110 0
16N/04E-09D01 M 07/13/65 5050 1114	--	7.5	220	14 .70 34	11 .90 44	10 .44 21	0.4 .01	0.0 .00	81 1.33 66	2.8 .06 3	14 .39 19	15 .24 12	--	.0	--	182 107	79 13
16N/04E-09D02 M 07/13/65 5050 1120	--	7.7	209	15 .75 35	9.1 .75 35	14 .61 28	2.0 .05 2	0.0 .00	97 1.59 76	6.6 .14 7	13 .37 18	0.3 .00	--	.1	--	168 108	75 0
15N/04E-20J02 M 07/15/65 5050 1330	--	8.6	428	32 1.60 37	26 2.14 49	13 .57 13	1.2 .03 1	7.0 .23 5	177 2.90 67	47 .98 23	6.3 .18 4	1.2 .02	--	.0	--	271 220	187 31
15N/04E-31A01 M 07/15/65 5050	--	8.5	252	21 1.05 39	13 1.07 40	12 .52 20	0.9 .02 1	4.0 .13 5	134 2.20 85	0.8 .02 1	8.4 .24 9	0.8 .01	--	.0	--	172 127	105 0
15N/05E-19N01 M 07/14/65 5050 1033	76.CF	8.3	198	14 .70 37	5.8 .48 25	16 .70 37	1.1 .03 2	0.0 .00	81 1.33 72	1.6 .03 2	14 .39 21	6.0 .10 5	--	.0	--	170 98	59 0
14N/03E-24P01 M 07/15/65 5050 1140	--	7.5	284	23 1.15 42	6.4 .53 19	23 1.00 36	3.1 .08 3	0.0 .00	119 1.95 72	0.0 .00	26 .73 27	0.8 .01	--	.2	--	184 141	84 0

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME / LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
14N/C4E-07M01 M 07/15/65 5050 1130	--	8.2	595	74 3.69 61	16 1.32 22	24 1.04 17	1.3 .03	0.0 .00	270 4.43 72	57 1.19 19	20 .56 9	0.4 .01	--	.0	--	330 325	250 29
14N/C4E-22H01 M 08/06/65 5050 0922	--	8.5	237	22 1.10 44	7.5 .62 25	17 .74 30	1.3 .03 1	5.0 .17 7	104 1.71 72	2.8 .06 3	14 .39 16	2.6 .04 2	--	.0	--	189 123	86 0
14N/05E-15C01 M 07/15/65 5050 0850	--	7.9	208	14 .70 35	8.5 .70 35	13 .57 29	0.8 .02 1	0.0 .00	83 1.36 71	6.4 .13 7	13 .37 19	3.3 .05 3	--	.0	--	183 100	70 2
14N/C5E-16C02 M 07/15/65 5050 0840	69.0F	8.3	220	14 .70 33	6.3 .52 24	21 .91 42	0.8 .02 1	0.0 .00	93 1.53 73	2.8 .06 3	16 .45 22	3.4 .05 2	--	.0	--	198 110	61 0
14N/05E-21G01 M 07/15/65 5050 0945	67.0F	8.3	485	34 1.70 41	7.0 .58 14	43 1.87 45	1.4 .04 1	0.0 .00	98 1.61 39	6.7 .14 3	82 2.31 56	4.9 .08 2	--	.0	--	350 227	11 0
14N/05E-22M01 M 08/06/65 5050 1255	--	8.3	366	30 1.50 44	3.4 .28 8	36 1.57 46	1.7 .04 1	0.0 .00	88 1.44 44	7.9 .16 5	58 1.64 50	3.2 .05 2	--	.1	--	255 183	89 17
14N/05E-32R01 M 08/16/65 5050	--	8.5	284	25 1.25 44	9.1 .75 27	18 .78 28	1.1 .03 1	4.0 .13 5	112 1.84 67	4.6 .10 4	23 .65 24	2.6 .04 1	--	.0	--	211 142	100 2
14N/05E-32R02 M 08/13/65 5050 1435	65.0F	8.5	314	29 1.45 47	12 .99 32	14 .61 20	0.9 .02 1	4.0 .13 4	111 1.82 61	4.3 .09 3	31 .87 29	3.3 .05 2	--	.0	--	218 153	121 24
13N/05E-04B02 M 07/15/65 5050 0958	--	8.2	845	37 1.85 25	9.6 .79 11	106 4.61 63	1.8 .05 1	0.0 .00	115 1.89 26	15 .31 4	182 5.13 70	2.3 .04 1	--	.5	--	498 411	132 38
PLACER COUNTY					52107												
13N/05E-24P01 M 08/00/65 5050	--	8.3	465	--	--	14 .61	--	0.0 .00	181 2.97	--	36 1.02	--	--	--	--	300	208 60
13N/06E-16D01 M 08/00/65 5050	--	7.8	139	--	--	12 .52	--	0.0 .00	50 .82	--	5.4 .15	--	--	--	--	118	39 0
12N/05E-02B01 M 08/00/65 5050	--	7.5	212	--	--	9.4 .41	--	0.0 .00	89 1.46	--	8.5 .24	--	--	--	--	158	84 11

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME	LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
11N/05E-31AC1	M	--	8.2	293	--	--	28	--	0.0	126	--	22	--	--	--	--	--	204	80
08/00/65	5050						1.22		.00	2.07		.62							0
11N/06E-16M01	M	--	8.1	378	--	--	46	--	0.0	92	--	56	--	--	--	--	--	277	75
08/00/65	5050						2.00		.00	1.51		1.58							0
11N/06E-27CC1	M	--	8.2	269	--	--	22	--	0.0	130	--	14	--	--	--	--	--	204	86
08/00/65	5050						.96		.00	2.13		.39							0
11N/06E-34B01	M	--	8.3	268	--	--	21	--	0.0	136	--	10	--	--	--	--	--	226	90
08/00/65	5050						.91		.00	2.23		.28							0
10N/05E-06D01	M	--	8.6	309	--	--	30	--	6.0	130	--	19	--	--	--	--	--	200	90
08/00/65	5050						1.31		.20	2.13		.54							0
10N/06E-05C01	M	--	8.2	184	--	--	15	--	0.0	85	--	10	--	--	--	--	--	177	58
08/00/65	5050						.65		.00	1.39		.28							0
10N/06E-10D01	M	--	8.3	398	--	--	25	--	0.0	184	--	27	--	--	--	--	--	297	152
08/00/65	5050						1.09		.00	3.02		.76							1
SACRAMENTO COUNTY						52108													
10N/05E-24C01	M	--	8.4	370	18	8.0	47	2.2	4.0	134	9.7	42	2.0	--	.4	--	287	78
09/09/65	5050				.90	.66	2.04	.06	.13	2.20	.20	1.18	.03				199	0
					25	18	56	2	3	59	5	32	1					
09N/04E-08N01	M	--	8.5	700	17	6.2	135	3.3	10	275	26	64	0.2	--	2.0	--	447	68
09/08/65	5050				.85	.51	5.87	.08	.33	4.51	.54	1.80	.00				398	0
					12	7	80	1	5	63	8	25						
09N/04E-27R03	M	--	8.1	281	27	14	11	2.0	0.0	164	0.3	7.5	1.1	--	.1	--	175	124
09/08/65	5050				1.35	1.15	.48	.05	.00	2.69	.01	.21	.02				143	0
					45	38	16	2		92		7	1					
09N/04E-27R04	M	--	8.7	451	44	28	14	3.2	16	245	5.9	12	0.2	--	.1	--	276	224
09/08/65	5050				2.20	2.30	.61	.08	.53	4.02	.12	.34	.00				243	0
					42	44	12	2	11	80	2	7						
09N/04E-27R05	M	--	8.1	411	38	21	19	2.7	0.0	238	6.9	12	0.6	--	.2	--	250	181
09/08/65	5050				1.90	1.73	.83	.07	.00	3.90	.14	.34	.01				217	0
					42	38	18	2		89	3	8						

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME / LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
09N/04E-33L01 M 08/26/65 5050 0230	--	8.3	1740	81 4.04 25	34 2.79 17	212 9.22 57	5.9 .15 1	0.0 .00	235 3.85 24	0.8 .02	435 12.27 76	0.5 .01	--	1.6	--	997 886	344 152
09N/06E-03A01 M 09/09/65 5050	--	8.2	263	24 1.20 44	10 .82 30	14 .61 22	3.6 .09 3	0.0 .00	139 2.28 96	1.6 .03 1	1.4 .04 2	1.9 .03 1	--	.0	--	204 125	102 0
09N/06E-03C01 M 09/09/65 5050	--	8.2	474	-- 1.35	--	31 .00	--	0.0 2.44	149	--	62 1.75	--	--	--	--	--	162 40
09N/06E-04G01 M 09/09/65 5050	60.0F	8.3	267	-- .65	--	15 .00	--	0.0 2.03	124	--	11 .31	--	--	--	--	188	99 0
09N/06E-09G01 M 09/09/65 5050	--	8.3	176	18 .75 40	7.9 .65 35	9.0 .39 21	2.9 .07 4	0.0 .00	92 1.51 83	1.2 .02 1	8.8 .25 14	2.4 .04 2	--	.0	--	153 92	70 0
09N/06E-10D01 M 09/09/65 5050	--	8.3	246	20 1.00 41	9.0 .74 31	14 .61 25	2.9 .07 3	0.0 .00	105 1.72 72	1.6 .03 1	21 .59 25	3.4 .05 2	--	.0	--	190 123	87 1
09N/06E-27P01 M 09/06/65 5050	--	8.3	255	-- .65	--	15 .00	--	0.0 2.15	131	--	8.5 .24	--	--	--	--	142	96 0
09N/06E-29M02 M 09/09/65 5050	69.0F	8.1	218	20 1.00 42	11 .90 38	8.7 .38 16	4.7 .12 5	0.0 .00	128 2.10 91	0.3 .01	6.8 .19 8	1.0 .02 1	--	.0	--	168 115	95 0
09N/06E-32D02 M 09/09/65 5050	--	8.3	237	-- .41	--	9.4 .00	--	0.0 1.95	119	--	7.6 .21	--	--	--	--	156	98 1
09N/07E-32B01 M 07/28/65 5050	--	7.3	165	13 .65 40	8.1 .67 41	6.8 .30 18	0.6 .02 1	0.0 .00	75 1.23 77	4.1 .09 6	4.4 .12 8	9.6 .15 9	--	.0	--	137 83	66 5
08N/04E-03B01 M 08/26/65 5050 0245	--	7.8	803	48 2.40 32	25 2.06 27	66 2.87 38	6.5 .17 2	0.0 .00	173 2.84 38	0.2 .00	163 4.60 62	0.0 .00	--	.4	--	446 394	224 82
08N/05E-15F01 M 07/22/65 5050	--	8.6	361	40 2.00 52	13 1.07 28	15 .65 17	4.7 .12 3	11 .37 10	160 2.62 70	0.3 .01	25 .71 19	1.7 .03 1	--	.0	--	232 189	152 3
08N/07E-02N02 M 07/22/65 5050	--	7.9	161	13 .65 41	5.2 .43 27	11 .48 30	1.4 .04 3	0.0 .00	72 1.18 75	3.4 .07 4	9.3 .26 16	4.2 .07 4	--	.0	--	163 83	54 0

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME / LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
07N/07E-27B01 M	--	8.5	362	31	19	14	1.4	6.0	145	1.3	27	20	--	.0	--	235	154
07/28/65 5050				1.55	1.56	.61	.04	.20	2.38	.03	.76	.32				191	25
				41	41	16	1	5	64	1	21	9					
05N/05E-33J01 M	--	8.6	352	12	4.6	66	0.7	8.0	198	0.0	9.4	1.7	--	.5	--	222	49
08/00/65 5050				.60	.38	2.87	.02	.27	3.25	.00	.27	.03				200	0
				16	10	74	1	7	85		7	1					
05N/08E-31J01 M	--	8.4	181	12	6.6	14	2.5	2.0	84	5.0	5.3	3.1	--	.0	--	179	57
08/00/65 5050				.60	.54	.61	.06	.07	1.38	.10	.15	.05				92	0
				33	30	34	3	4	79	6	9	3					
04N/03E-31F02 M	66.0F	8.9	834	--	--	139	--	26	314	--	71	--	--	--	--	476	144
08/04/65 5050						6.05		.87	5.15		2.00						0
1010																	
YOLO COUNTY					52109												
12N/02W-02A01 M	74.0F	8.5	892	59	5.1	65	1.2	5.0	174	6.9	97	21	--	.9	--	467	168
07/20/65 5050				2.94	.42	2.83	.03	.17	2.85	.14	2.74	.34				346	17
0405				47	7	45		3	46	2	44	5					
12N/01W-15N01 M	76.0F	8.4	481	49	26	15	0.4	4.0	257	3.6	19	14	--	.1	--	259	228
07/20/65 5050				2.45	2.14	.65	.01	.13	4.21	.07	.54	.23				257	11
0350				47	41	12		3	81	1	10	4					
11N/03W-09Q01 M	--	8.1	1020	91	43	60	1.2	0.0	385	54	119	7.4	--	.2	--	551	405
07/26/65 5050				4.54	3.53	2.61	.03	.00	6.31	1.12	3.36	.12				564	90
0355				42	33	24			58	10	31	1					
11N/03W-10E01 M	--	8.5	762	25	19	119	1.5	9.0	270	66	66	3.4	--	2.2	--	503	144
07/26/65 5050				1.25	1.56	5.18	.04	.30	4.43	1.37	1.86	.05				443	0
0500				16	19	65		4	55	17	23	1					
11N/03W-26M03 M	--	7.9	981	94	46	60	0.7	0.0	456	42	86	6.8	--	1.1	--	522	423
07/26/65 5050				4.69	3.78	2.61	.02	.00	7.48	.87	2.43	.11				560	49
0343				42	34	24			69	8	22	1					
11N/02W-35J01 M	74.0F	8.6	520	42	27	36	0.8	14	258	14	13	21	--	.2	--	306	216
07/20/65 5050				2.10	2.22	1.57	.02	.47	4.23	.29	.37	.34				294	0
0430				36	38	27		8	74	5	6	6					
11N/01E-04R01 M	78.0F	8.7	931	29	44	127	1.9	24	458	52	42	0.1	--	3.2	--	522	256
07/20/65 5050				1.45	3.62	5.52	.05	.80	7.51	1.08	1.18	.00				548	0
0335				14	34	52		8	71	10	11						
11N/01E-17M01 M	70.0F	8.8	516	32	33	36	1.6	18	285	5.3	7.8	7.3	--	.6	--	245	214
07/20/65 5050				1.60	2.71	1.57	.04	.60	4.67	.11	.22	.12				281	0
0320				27	46	27	1	10	82	2	4	2					

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME / LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
11N/02E-22AC1 M 07/20/65 5050 0300	76.0F	8.5	1600	51 2.54 14	77 6.33 35	206 8.96 50	3.0 .08	14 .47 3	528 8.66 49	146 3.04 17	187 5.27 30	9.2 .15 1	--	5.4	--	916 957	444 0
11N/02E-32CC1 M 09/11/65 5050 0110	--	8.2	1110	51 2.54 21	61 5.01 41	106 4.61 38	1.5 .04	0.0 .00	551 9.04 73	48 1.00 8	79 2.23 18	12 .19 2	--	3.3	--	639 632	378 0
10N/02W-01MC1 M 07/20/65 5050 0440	70.0F	8.6	501	32 1.60 29	26 2.14 38	44 1.91 34	1.2 .03 1	15 .50 9	271 4.44 79	14 .29 5	9.6 .27 5	5.3 .09 2	--	.1	--	266 280	187 0
10N/02W-16LC1 M 07/20/65 5050 0500	75.0F	8.4	1790	116 5.79 29	85 6.99 35	158 6.87 35	2.1 .05 1	8.0 .27 1	600 9.84 50	61 1.27 6	288 8.12 41	8.1 .13 1	--	1.7	--	1090 1022	640 135
10N/02W-17JC2 M 07/20/65 5050 0515	75.0F	8.6	967	31 1.55 16	24 1.97 21	136 5.92 62	2.8 .07 1	13 .43 4	278 4.56 47	35 .73 8	105 2.96 31	61 .98 10	--	.3	--	556 544	176 0
10N/02W-18FC1 M 07/20/65 5050 0510	78.0F	8.5	2030	86 4.29 21	46 3.78 19	278 12.09 60	0.7 .02	16 .53 3	480 7.87 39	86 1.79 9	346 9.76 48	22 .35 2	--	.9	--	1180 1117	406 0
10N/02W-18L01 M 06/27/65 5050 0320	--	8.3	1440	116 5.79 36	52 4.27 26	141 6.13 38	1.1 .03	0.0 .00	482 7.90 49	166 3.45 21	167 4.71 29	0.5 .01	--	1.4	--	818 881	502 107
10N/02W-23A01 M 07/20/65 5050 0450	75.0F	8.7	436	35 1.75 35	19 1.56 31	39 1.70 34	1.5 .04 1	17 .57 12	235 3.85 79	9.2 .19 4	7.3 .21 4	4.6 .07 1	--	.2	--	250 248	166 0
10N/01W-04C01 M 07/29/65 5050 0530	--	8.5	578	15 .75 13	40 3.29 56	42 1.83 31	0.9 .02	8.0 .27 5	284 4.66 81	9.0 .19 3	19 .54 9	4.3 .07 1	--	.3	--	296 278	200 0
10N/01E-01C01 M 07/21/65 5050 0545	--	8.6	839	47 2.35 25	58 4.77 51	52 2.26 24	2.0 .05 1	21 .70 8	367 6.02 65	25 .52 6	63 1.78 19	16 .26 3	--	2.0	--	443 466	357 21
10N/01E-15C01 M 07/21/65 5050 0425	--	8.5	1110	60 2.99 24	64 5.26 42	97 4.22 34	0.9 .02	20 .67 5	410 6.72 54	130 2.70 22	78 2.20 18	4.5 .07 1	--	1.3	--	666 657	412 43
10N/02E-01G01 M 07/20/65 5050 0250	71.0F	8.1	3120	149 7.44 22	216 17.76 52	202 8.79 26	4.8 .12	0.0 .00	454 7.45 22	458 9.53 28	607 17.12 50	2.3 .04	--	5.1	--	1920 1857	1260 888
10N/02E-27FC1 M 07/21/65 5050 0345	--	8.5	604	41 2.05 31	29 2.38 27	47 2.04 31	1.7 .04 1	12 .40 6	254 4.17 65	15 .31 5	53 1.49 23	1.1 .02	--	1.7	--	331 326	221 0

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME	LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
					CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
09N/01W-16H01 M		--	8.6	939	60	30	100	1.4	14	296	73	103	1.8	--	.8	--	520	274
07/21/65	SCSC				2.99	2.47	4.35	.04	.47	4.85	1.52	2.90	.03				529	8
0810					30	25	44		5	50	16	30						
09N/01W-30L01 M		--	8.6	874	44	36	91	1.4	18	284	60	82	16	--	.9	--	478	259
07/21/65	SCSC				2.20	2.96	3.96	.04	.60	4.66	1.25	2.31	.26				488	0
0455					24	32	43		7	51	14	25	3					
09N/01E-12A01 M		--	8.3	928	50	58	67	1.3	0.0	402	44	87	11	--	1.6	--	509	366
07/21/65	SCSC				2.50	4.77	2.91	.03	.00	6.59	.92	2.45	.18				517	37
0410					24	47	29			65	9	24	2					
09N/02E-04L01 M		--	8.4	876	40	48	82	1.6	8.0	400	34	63	16	--	2.5	--	476	299
07/21/65	SCSC				2.00	3.95	3.57	.04	.27	6.56	.71	1.78	.26				491	0
0430					21	41	37		3	68	7	19	3					
09N/02E-10D01 M		--	8.5	663	32	43	50	2.6	13	299	43	34	5.2	--	.5	--	382	257
07/21/65	SCSC				1.60	3.53	2.18	.07	.43	4.90	.89	.96	.08				370	0
0350					22	48	30	1	6	67	12	13	1					
09N/03E-07D02 M		--	8.7	620	33	30	61	2.1	20	280	24	37	0.4	--	1.8	--	339	208
07/21/65	SCSC				1.65	2.47	2.65	.05	.67	4.59	.50	1.04	.01				347	0
0610					24	36	39	1	10	67	7	15						
08N/01W-13G01 M		71.0F	8.1	651	47	30	48	0.9	0.0	338	23	28	8.9	--	.4	--	347	242
07/26/65	SCSC				2.35	2.47	2.09	.02	.00	5.54	.48	.79	.14				352	0
0215					34	36	30			80	7	11	2					
08N/01E-09F01 M		--	8.3	769	48	38	53	2.1	0.0	375	22	54	7.4	--	2.0	--	393	275
07/21/65	SCSC				2.40	3.12	2.31	.05	.00	6.15	.46	1.52	.12				410	0
0440					30	40	29	1		75	6	18	1					
08N/01E-26F01 M		66.0F	8.7	939	--	--	52	--	26	460	--	18	--	--	--	--	562	437
08/05/65	SCSC						2.26		.87	7.54		.51						17
1000																		
08N/02E-13F02 M		--	8.6	663	30	50	48	1.1	20	346	28	20	3.8	--	.4	--	380	282
07/27/65	SCSC				1.50	4.11	2.09	.03	.67	5.67	.58	.56	.06				371	0
1015					19	53	27		9	75	8	7	1					
08N/03E-05D01 M		--	8.9	782	32	38	82	2.9	20	328	55	49	1.6	--	.9	--	459	236
08/26/65	SCSC				1.60	3.12	3.57	.07	.67	5.38	1.14	1.38	.03				442	0
0515					19	37	43	1	8	63	13	16						
08N/03E-05G01 M		--	8.6	736	25	41	74	2.4	16	318	45	47	1.9	--	.9	--	420	230
08/26/65	SCSC				1.25	3.37	3.22	.06	.53	5.22	.94	1.33	.03				409	0
0530					16	43	41	1	7	65	12	17						
08N/03E-19L01 M		--	8.0	1300	53	112	31	1.6	0.0	672	103	60	2.2	--	.8	--	756	592
07/27/65	SCSC				2.64	9.21	3.62	.04	.00	11.02	2.14	1.69	.04				743	41
1030					17	60	23			74	14	11						

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME / LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
08N/03E-19MC2 M 07/27/65 5050 1040	--	8.4	1700	44 2.20 11	135 11.10 53	172 7.48 36	1.7 .04	16 .53 3	884 14.50 71	129 2.68 13	66 1.86 9	52 .84 4	--	1.9	--	1030 1051	664 0
07N/03E-09JC1 M 07/27/65 5050 1145	--	8.4	1020	30 1.50 13	83 6.82 60	69 3.00 26	1.2 .03	15 .50 5	423 6.94 63	43 .89 8	52 1.75 16	62 1.00 9	--	.8	--	599 573	416 44
07N/03E-31N01 M 07/21/65 5050 1140	--	8.2	1080	46 2.30 18	79 6.49 52	85 3.70 30	1.2 .03	0.0 .00	582 9.54 77	64 1.33 11	33 .93 8	36 .58 5	--	1.1	--	591 630	440 0
07N/04E-33G01 M 08/26/65 5050 0320	--	8.4	1960	62 3.09 17	23 1.89 11	295 12.83 72	4.7 .12 1	4.0 .13 1	224 3.67 21	0.2 .00	497 14.02 79	1.2 .02	--	2.0	--	1070 999	248 58
06N/03E-25A01 M 08/26/65 5050 0415	--	8.6	484	11 .55 11	3.8 .31 6	91 3.96 81	2.0 .05 1	8.0 .27 5	209 3.43 69	24 .50 10	28 .79 16	0.7 .01	--	.8	--	300 272	43 0
06N/03E-25A02 M 08/26/65 5050 0420	--	8.6	608	16 .80 13	18 1.48 23	91 3.96 63	2.4 .06 1	10 .33 5	218 3.58 58	22 .46 8	62 1.75 29	0.3 .00	--	1.0	--	347 330	112 0
SAN JOAQUIN VALLEY				52200													
SAN JOAQUIN COUNTY					52201												
04N/04E-14C01 M 08/00/65 5050	--	8.6	1010	16 .80 8	3.9 .32 3	198 3.61 88	1.5 .04	12 .40 4	200 3.28 34	1.0 .02	212 5.98 62	0.8 .01	--	1.6	--	568 545	56 0
04N/05E-08F01 M 08/00/65 5050	--	7.7	5180	256 12.77 25	192 15.78 31	495 21.53 43	2.0 .05	0.0 .00	340 5.58 11	9.0 .19	1640 46.25 89	1.8 .03	--	.8	--	3840 2763	1430 1152
04N/06E-11P01 M 08/00/65 5050	--	7.8	225	19 .95 40	9.8 .81 34	12 .52 22	3.0 .08 3	0.0 .00	121 1.98 85	6.0 .12 5	7.3 .21 9	0.9 .01	--	.0	--	527 117	88 0
04N/07E-23B03 M 08/00/65 5050	--	7.5	228	16 .80 34	8.5 .70 30	18 .78 33	2.4 .06 3	0.0 .00	112 1.84 81	1.0 .02 1	13 .37 16	3.3 .05 2	--	.0	--	201 117	75 0
03N/06E-27B02 M 08/00/65 5050	--	8.5	319	30 1.50 48	12 .99 30	16 .70 21	4.2 .11 3	5.0 .17 5	154 2.53 76	10 .21 6	8.5 .24 7	10 .16 5	--	.0	--	229 171	124 0
03N/07E-11G01 M 08/00/65 5050	--	8.2	187	14 .70 37	6.3 .52 27	14 .61 32	2.7 .07 4	0.0 .00	90 1.48 80	6.0 .12 7	6.2 .17 9	4.6 .07 4	--	.0	--	172 98	61 0

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MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME / LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
03N/08E-08E01 M 08/00/65 5050	--	8.3	167	11 .55 33	4.7 .39 23	16 .70 42	1.5 .04 2	2.0 .07 4	73 1.20 75	1.0 .02 1	8.6 .24 15	4.9 .08 5	--	.0	--	170 85	47 0
02N/06E-27L01 M 08/00/65 5050	--	8.5	360	29 1.45 36	13 1.07 27	32 1.39 35	4.2 .11 3	8.0 .27 7	182 2.98 77	15 .31 8	10 .28 7	1.5 .02 1	--	.0	--	256 202	124 0
02N/07E-14N01 M 08/00/65 5050	--	8.4	401	38 1.90 44	19 1.56 36	18 .78 18	4.8 .12 3	7.0 .23 5	218 3.58 82	9.0 .19 4	9.6 .27 6	4.7 .08 2	--	.0	--	266 217	172 0
02N/08E-15L01 M 08/00/65 5050	--	8.0	213	19 .95 43	8.6 .71 32	9.9 .43 19	4.5 .12 5	0.0 .00	119 1.95 89	4.0 .08 4	3.7 .10 5	3.2 .05 2	--	.0	--	186 111	83 0
02N/09E-07G01 M 08/00/65 5050	--	8.3	247	24 1.20 47	10 .82 32	11 .48 19	1.9 .05 2	2.0 .07 3	113 1.85 74	15 .31 12	7.0 .20 8	4.5 .07 3	--	.0	--	197 131	102 6
01N/07W-11J01 M 08/00/65 5050	--	8.4	259	-- 	-- 	17 .74 	-- 	4.0 .13 	122 2.00 	-- 	9.3 .26 	-- 	--	--	--	-- 	90 0
01N/04E-03N01 M 08/00/65 5050	--	8.8	1220	45 2.25 17	24 1.97 15	202 8.79 67	2.9 .07 1	33 1.10 8	428 7.02 54	9.0 .19 1	163 4.60 35	6.0 .10 1	--	1.4	--	700 696	210 0
01N/06E-04D01 M 08/00/65 5050	--	8.5	358	16 .80 20	5.8 .48 12	60 2.61 66	1.7 .04 1	5.0 .17 4	166 2.72 69	3.0 .06 2	35 .99 25	0.3 .00 	--	.2	--	258 208	64 0
01N/06E-10P01 M 08/00/65 5050	--	8.4	2660	107 5.34 21	49 4.03 16	368 16.01 62	22 .56 2	4.0 .13 	146 2.39 9	1.0 .02 	835 23.55 90	1.6 .03 	--	.9	--	1670 1460	470 344
01N/07E-12C01 M 08/00/65 5050	--	8.2	158	-- 	-- 	4.4 .19 	-- 	0.0 .00 	76 1.25 	-- 	2.6 .07 	-- 	--	--	--	-- 	67 5
01S/04E-14M01 M 08/00/65 5050	--	8.6	1460	29 1.45 10	16 1.32 9	266 11.57 80	5.2 .13 1	14 .47 3	230 3.77 27	236 4.91 35	176 4.96 35	1.7 .03 	--	2.1	--	896 859	138 0
01S/05E-10H02 M 08/00/65 5050	--	8.4	800	43 2.15 26	31 2.55 31	79 3.44 42	2.1 .05 1	4.0 .13 2	172 2.82 34	57 1.19 14	145 4.09 50	2.0 .03 	--	.1	--	512 447	234 87
01S/06E-04A01 M 08/00/65 5050	--	8.5	2150	184 9.18 44	54 4.44 21	162 7.05 34	3.2 .08 	10 .33 2	168 2.76 13	28 .58 3	600 16.92 82	0.6 .01 	--	.2	--	1660 1124	680 526

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MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME	LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE: CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	MILLIGRAMS PER LITER: F	B	SIO2	TDS SUM	TH NCH
01S/07E-1CA01	M	--	8.3	267	20	9.5	20	3.1	2.0	123	10	12	3.6	--	.1	--	206	89
08/00/65	5050				1.00	.78	.87	.08	.07	2.02	.21	.34	.06				141	0
					37	29	32	3	3	75	8	13	2					
01S/09E-08F01	M	--	8.4	229	16	7.8	18	2.8	4.0	88	10	12	9.2	--	.1	--	203	72
08/00/65	5050				.80	.64	.78	.07	.13	1.44	.21	.34	.15				123	0
					35	28	34	3	6	63	9	15	7					
02S/04E-01P01	M	--	8.4	614	27	7.9	87	1.2	4.0	100	128	48	4.2	--	.5	--	386	100
08/00/65	5050				1.35	.65	3.78	.03	.13	1.64	2.66	1.35	.07				357	12
					23	11	65	1	2	28	45	23	1					
02S/04E-36P01	M	--	8.5	1280	64	34	156	3.0	8.0	158	277	129	11	--	1.3	--	628	298
08/00/65	5050				3.19	2.79	6.79	.08	.27	2.59	5.76	3.64	.18				761	155
					25	22	53	1	2	21	46	29	1					
02S/05E-22C01	M	--	8.3	1330	72	34	152	3.7	4.0	144	198	218	14	--	1.2	--	844	320
08/00/65	5050				3.59	2.79	6.61	.09	.13	2.36	4.12	6.15	.23				767	196
					27	21	51	1	1	18	32	47	2					
02S/05E-23P01	M	--	8.1	2030	127	66	198	2.2	0.0	278	235	366	33	--	1.8	--	1330	590
08/00/65	5050				6.34	5.43	8.61	.06	.00	4.56	4.89	10.32	.53				1165	362
					31	27	42			22	24	51	3					
02S/05E-29C01	M	--	8.4	869	62	18	88	2.8	6.0	160	90	117	15	--	1.5	--	560	230
08/00/65	5050				3.09	1.48	3.83	.07	.20	2.62	1.87	3.30	.24				479	89
					36	17	45	1	2	32	23	40	3					
02S/06E-20J05	M	--	8.5	1450	59	28	192	3.2	8.0	154	134	280	1.4	--	.6	--	888	264
08/00/65	5050				2.94	2.30	8.35	.08	.27	2.53	2.79	7.90	.02				782	124
					22	17	61	1	2	19	21	58						
02S/07E-20R01	M	--	8.5	438	45	13	30	3.5	7.0	179	26	16	25	--	.1	--	320	167
08/00/65	5050				2.25	1.07	1.31	.09	.23	2.94	.54	.45	.40				253	9
					48	23	28	2	5	64	12	10	9					
03S/05E-08L01	M	--	8.4	816	66	17	73	2.7	8.0	140	91	94	38	--	.8	--	548	235
08/00/65	5050				3.29	1.40	3.18	.07	.27	2.30	1.89	2.65	.61				459	107
					41	18	40	1	3	30	24	34	8					
03S/05E-14D01	M	--	8.0	1390	103	32	133	2.8	0.0	164	192	220	23	--	.7	--	908	390
08/00/65	5050				5.14	2.63	5.79	.07	.00	2.69	3.99	6.20	.37				787	256
					38	19	42	1		20	30	47	3					
03S/05E-26M01	M	--	8.2	1320	88	39	139	2.8	0.0	106	435	78	28	--	1.0	--	988	378
08/00/65	5050				4.39	3.21	6.05	.07	.00	1.74	9.05	2.20	.45				863	291
					32	23	44	1		13	67	16	3					
03S/05E-35B01	M	--	8.2	1090	80	31	132	2.8	0.0	156	352	58	27	--	1.1	--	868	328
08/00/65	5050				3.99	2.56	5.74	.07	.00	2.56	7.32	1.64	.43				760	200
					32	21	46	1		21	61	14	4					

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME / LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
03S/06E-07F01 M 08/00/65 5050	--	8.1	1750	83 4.14 24	36 2.96 17	230 10.01 58	2.4 .06	0.0 .00	216 3.54 21	182 3.79 22	332 9.36 55	22 .35 2	--	1.7	--	1100 995	355 178
03S/06E-22Q01 M 08/00/65 5050	--	7.8	671	50 2.50 44	1.7 .14 2	69 3.00 53	1.9 .05 1	0.0 .00	195 3.20 48	114 2.37 35	34 .96 14	12 .19 3	--	.5	--	438 379	196 36
LAHONTAN REGION										60000							
SURPRISE VALLEY				60100													
46N/16E-14R01 M 08/17/65 5050	55.0F	8.5	316	34 1.70 54	5.6 .46 15	20 .87 28	4.4 .11 4	5.0 .17 6	117 1.92 64	22 .46 15	15 .42 14	1.6 .03 1	--	.1	--	226 155	108 4
46N/16E-29L01 M 08/17/65 5050	56.0F	8.6	588	-- 	-- 	131 5.70	-- 	7.0 .23	285 4.67	-- 	20 .56	-- 	1.6	.7	--	--	10 0
45N/16E-17C01 M 08/17/65 5050	62.0F	8.5	281	-- 	-- 	9.7 .42	-- 	3.0 .10	158 2.59	-- 	2.8 .08	-- 	--	--	--	--	127 0
45N/16E-19C01 M 08/17/65 5050	66.0F	8.6	347	30 1.50	8.5 .70	31 1.35	-- 	8.0 .27	180 2.95	-- 	4.7 .13	-- 	--	--	--	--	110 0
44N/16E-06E02 M 08/17/65 5050	77.0F	8.8	730	-- 	-- 	154 6.70	-- 	16 .53	247 4.05	-- 	75 2.12	-- 	--	5.4	--	--	13 0
43N/16E-20D01 M 08/15/65 5050	65.0F	8.6	290	-- 	-- 	62 2.70	-- 	5.0 .17	150 2.46	-- 	1.9 .05	4.1 .07	--	--	--	--	19 0
43N/16E-33M03 M 08/20/65 5050	64.0F	8.6	342	29 1.45 40	6.2 .51 14	38 1.65 45	0.7 .02 1	7.0 .23 6	179 2.94 83	5.6 .12 3	3.3 .09 3	11 .18 5	--	.1	--	200 189	98 0
42N/16E-06F02 M 08/15/65 5050	48.0F	7.3	322	-- 	-- 	11 .48	-- 	0.0 .00	188 3.08	-- 	1.6 .05	-- 	--	--	--	--	141 0
42N/16E-21L01 M 08/17/65 5050	56.0F	8.5	250	-- 	-- 	22 .96	-- 	2.0 .07	135 2.21	-- 	0.9 .03	-- 	--	--	--	--	79 0

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME / LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
42N/16E-34F01 M 08/15/65 5050	58.0F	8.4	350	-- 	-- 	62 2.70	-- 	3.0 .10	207 3.39	-- 	3.3 .09	-- 	-- 	-- 	-- 	-- 	50 0
41N/16E-04G01 M 08/12/65 5050	54.0F	8.6	264	25 1.25 45	7.4 .61 22	20 .87 31	1.5 .04 1	5.0 .17 6	151 2.48 92	0.5 .01	0.9 .03 1	0.6 .01	-- 	.0 	-- 	166 135	93 0
41N/16E-25C03 M 08/15/65 5050	56.0F	8.4	192	-- 	-- 	34 1.48	-- 	1.0 .03	84 1.38	-- 	3.8 .11	-- 	-- 	-- 	-- 	-- 	19 0
40N/16E-11G01 M 08/15/65 5050	51.0F	8.4	211	-- 	-- 	12 .52	-- 	2.0 .07	126 2.07	-- 	0.0 .00	-- 	-- 	.0 	-- 	-- 	82 0
40N/16E-13R01 M 08/15/65 5050	52.0F	8.5	225	-- 	-- 	10 .44	-- 	4.0 .13	130 2.13	-- 	0.0 .00	-- 	-- 	-- 	-- 	-- 	90 0
40N/16E-36F01 M 08/15/65 5050	56.0F	8.5	301	-- 	-- 	21 .91	-- 	6.0 .20	166 2.72	-- 	0.5 .01	5.1 .08	-- 	-- 	-- 	-- 	114 0
40N/17E-20C01 M 08/15/65 5050	55.0F	8.4	380	-- 	-- 	40 1.74	-- 	4.0 .13	130 2.13	-- 	20 .56	-- 	-- 	-- 	-- 	-- 	84 0
39N/17E-05C01 M 08/15/65 5050	66.0F	8.4	416	12 .60 15	0.5 .04 1	73 3.18 82	3.0 .08 2	4.0 .13 4	93 1.53 49	67 1.39 44	2.8 .08 3	0.3 .00	2.6 	.7 	-- 	270 211	32 0
37N/13E-20C01 M 08/13/65 5050	--	8.5	2630	128 6.39 21	121 9.95 33	300 13.05 44	23 .59 2	18 .60 2	381 6.25 21	564 11.73 39	403 11.36 38	16 .26 1	-- 	.2 	-- 	2000 1760	816 474
35N/14E-24G02 M 08/12/65 5050	--	--	295	-- 	-- 	46 2.00	-- 	-- 	-- 	-- 	-- 	-- 	-- 	-- 	-- 	-- 	53
35N/16E-18C01 M 08/13/65 5050	57.0F	--	1040	-- 	-- 	206 8.96	-- 	-- 	-- 	-- 	-- 	-- 	-- 	-- 	-- 	-- 	135
35N/16E-19F01 M 08/13/65 5050	53.0F	--	324	-- 	-- 	67 2.91	-- 	-- 	-- 	-- 	-- 	-- 	-- 	-- 	-- 	-- 	28
34N/14E-15F01 M 08/13/65 5050	--	8.3	254	22 1.10 39	11 .90 32	16 .70 25	4.4 .11 4	0.0 .00	153 2.51 90	5.4 .11 4	3.9 .11 4	4.2 .07 3	-- 	.1 	-- 	184 142	102 0

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME	LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
					CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
34N/14E-22AC1	M	--	8.3	246	22	11	13	2.9	0.0	155	2.5	4.8	1.0	--	.1	--	156	103
08/13/65	5050				1.10	.96	.57	.07	.00	2.54	.05	.14	.02				134	0
					41	36	21	3		92	2	5	1					
34N/15E-21L01	M	--	--	134	--	--	21	--	--	--	--	--	--	--	--	--	--	20
08/13/65	5050						.91											
HONEY LAKE VALLEY					60400													
31N/12E-13M01	M	--	8.0	234	18	8.3	19	6.6	0.0	127	2.8	8.7	6.7	--	.0	--	170	79
08/10/65	5050				.90	.68	.83	.17	.00	2.08	.06	.25	.11				132	0
					35	26	32	7		93	2	10	4					
31N/12E-25G01	M	--	8.6	346	38	22	8.8	0.4	8.0	220	1.0	3.9	7.2	--	.0	--	219	186
08/10/65	5050				1.90	1.81	.38	.01	.27	3.61	.02	.11	.12				197	0
					46	44	9		7	87		3	3					
31N/12E-25G03	M	55.0F	--	3360	278	191	--	--	--	--	--	520	975	--	--	--	--	1480
08/10/65	5050				13.87	15.72						14.66	15.70					
30N/12E-33N02	M	--	--	304	--	--	28	--	--	--	--	--	--	--	.2	--	--	88
08/10/65	5050						1.22											
29N/12E-04G01	M	77.0F	8.3	749	14	1.0	128	2.8	0.0	85	156	61	1.7	--	1.5	--	482	39
08/10/65	5050				.70	.08	5.57	.07	.00	1.39	3.24	1.72	.03				408	0
					11	1	87	1		22	51	27						
29N/12E-15A01	M	--	--	202	--	--	14	--	--	--	--	--	--	--	--	--	--	76
08/09/65	5050						.61											
29N/13E-01N01	M	--	--	1040	--	--	212	--	--	--	--	--	--	--	--	--	--	108
08/09/65	5050						9.22											
29N/13E-06K01	M	60.0F	8.4	257	17	7.2	25	5.7	2.0	127	10	4.7	5.2	--	.1	--	216	72
08/09/65	5050				.85	.59	1.09	.15	.07	2.08	.21	.13	.08				139	0
					32	22	41	6	3	81	8	5	3					
29N/13E-14G01	M	--	--	602	--	--	108	--	--	--	--	26	80	--	--	--	--	49
08/09/65	5050						4.70					.73	1.29					
29N/13E-34N01	M	--	--	178	--	--	8.7	--	--	--	--	3.2	36	--	--	--	--	65
08/09/65	5050						.38					.09	.58					

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME	LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
					CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
29N/14E-04NC1 M		--	--	891	--	--	198	--	--	--	--	--	--	--	--	--	--	61
08/09/65	5050						8.61											
29N/14E-18RC1 M		--	--	524	--	--	110	--	--	--	--	--	--	0.6	.6	--	--	12
08/09/65	5050						4.79											
29N/14E-19A02 M		--	8.1	1900	29	14	377	16	0.0	479	418	36	92	--	2.3	--	1350	130
08/09/65	5050				1.45	1.15	16.40	.41	.00	7.86	8.69	1.02	1.48				1219	0
					7	6	84	2		41	46	5	8					
29N/15E-21N01 M		63.0F	--	842	--	--	195	--	--	--	--	--	--	--	.4	--	--	46
08/10/65	5050						8.48											
							1											
29N/15E-30A02 M		--	--	580	--	--	131	--	--	--	--	--	--	--	.4	--	--	42
08/10/65	5050						5.70											
29N/16E-30L01 M		--	8.3	332	6.9	1.7	51	8.7	0.0	112	22	18	4.1	--	.2	--	230	24
08/11/65	5050				.34	.14	2.22	.22	.00	1.84	.46	.51	.07				157	0
					12	5	76	8		64	16	18	2					
28N/13E-09EC1 M		--	--	205	--	--	9.8	--	--	--	--	2.6	27	--	--	--	--	81
08/09/65	5050						.43					.07	.43					
28N/13E-11K01 M		--	7.4	252	19	7.7	23	4.5	0.0	154	0.0	2.5	1.8	--	.0	--	178	79
08/09/65	5050				.95	.63	1.00	.12	.00	2.53	.00	.07	.03				134	0
					35	23	37	4		96		3	1					
28N/14E-02G01 M		55.0F	--	1180	--	--	219	--	--	--	--	152	--	--	.5	--	--	130
08/10/65	5050						9.53					4.29						
28N/14E-08A01 M		63.0F	8.6	392	7.0	0.8	73	5.9	5.0	186	7.1	12	3.8	--	.2	--	292	21
08/10/65	5050				.35	.07	3.18	.15	.17	3.05	.15	.34	.06				206	0
					9	2	85	4	5	81	4	9	2					
28N/14E-17RC1 M		--	--	384	--	--	44	--	--	--	--	--	--	--	--	--	--	128
08/10/65	5050						1.91											
28N/17E-18K01 M		62.0F	--	251	--	--	42	--	--	--	--	11	--	--	--	--	--	28
08/11/65	5050						1.83					.31						
28N/17E-20JC1 M		78.0F	--	262	--	--	48	--	--	--	--	--	--	--	--	--	--	37
08/11/65	5050						2.09											

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME	LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
					CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
27N/14E-06C01 M		--	7.7	298	31	8.4	11	3.4	0.0	123	1.5	6.4	30	--	.0	--	207	112
08/09/65	5050				1.55	.69	.48	.09	.00	2.02	.03	.18	.48				152	11
					55	25	17	3		75	1	7	18					
27N/14E-26E01 M		--	--	188	--	--	16	--	--	--	--	6.0	--	--	--	--	--	51
08/09/65	5050						.70					.17						
26N/15E-03F01 M		68.0F	--	207	--	--	19	--	--	--	--	4.0	--	--	--	--	--	62
08/09/65	5050						.83					.11						
25N/17E-21NC3 M		--	8.5	307	2.3	1.3	52	0.6	1.0	81	34	14	0.8	--	1.0	--	203	11
08/10/65	5050				.11	.11	2.26	.02	.03	1.33	.71	.39	.01				147	0
					4	4	90	1	1	54	29	16						
23N/14E-25G02 M		--	8.6	501	56	13	18	0.4	10	165	15	12	53	--	3.6	--	346	192
08/18/65	5050				2.79	1.07	.78	.01	.33	2.71	.31	.34	.85				252	40
					60	23	17		7	60	7	7	19					
23N/15E-28F04 M		--	8.5	302	45	5.6	10	3.9	4.0	166	0.0	2.8	13	--	.0	--	209	135
08/18/65	5050				2.25	.46	.44	.10	.13	2.72	.00	.08	.21				166	0
					69	14	14	3	4	87		3	7					
23N/15E-35C01 M		--	8.1	390	14	1.4	55	5.6	0.0	74	0.0	42	57	--	1.3	--	284	41
08/18/65	5050				.70	.12	2.39	.14	.00	1.21	.00	1.18	.92				213	0
					21	4	71	4		37		36	28					
SOUTH TAHOE VALLEY					60501													
12N/18E-03C01 M		--	7.7	62	8.7	0.6	2.4	1.3	0.0	36	0.2	1.0	0.8	--	.0	--	64	24
08/17/65	5050				.43	.05	.10	.03	.00	.59	.00	.03	.01				33	0
					70	8	16	5		94		5	2					
12N/18E-03F01 M		--	7.9	125	16	2.4	5.7	0.7	0.0	73	2.3	0.0	0.2	--	.0	--	82	50
08/17/65	5050				.80	.20	.25	.02	.00	1.20	.05	.00	.00				63	0
					63	16	20	2		96	4							
NORTH TAHOE VALLEY					60502													
16N/17E-14B01 M		--	8.3	268	--	--	10	--	0.0	141	--	6.7	--	--	--	--	182	111
08/17/65	5050						.44		.00	2.31		.19						0
15N/16E-24AC1 M		--	7.3	209	--	--	6.6	--	0.0	125	--	2.9	--	--	--	--	126	82
08/17/65	5050						.29		.00	2.05		.08						0

TABLE E-1
MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME	LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
					CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
15N/16E-25C01 M		--	8.0	110	--	--	5.0	--	0.0	64	--	0.7	--	--	--	--	98	43
08/17/65	5050						.22		.00	1.05		.02						0
CARSON VALLEY					60600													
11N/19E-35C02 M		--	8.3	123	17	0.4	7.7	1.9	0.0	72	2.1	0.9	0.6	--	.0	--	76	44
08/00/65	5050				.85	.03	.33	.05	.00	1.18	.04	.03	.01				66	0
					67	2	26	4		94	3	2	1					
11N/19E-35K01 M		--	7.4	95	9.7	1.7	5.4	1.0	0.0	55	0.8	1.4	0.5	--	.0	--	56	31
08/00/65	5050				.48	.14	.23	.03	.00	.90	.02	.04	.01				47	0
					55	16	26	3		93	2	4	1					
11N/20E-07N01 M		--	6.8	148	18	1.2	6.2	2.3	0.0	61	1.2	3.9	16	--	.1	--	94	50
08/00/65	5050				.90	.10	.27	.06	.00	1.00	.02	.11	.26				79	0
					68	8	20	5		72	1	8	19					
TOPAZ VALLEY					60700													
09N/22E-24C01 M		--	8.1	144	--	--	13	--	0.0	76	--	3.7	--	--	--	--	98	43
08/24/65	5050						.57		.00	1.25		.10						0
09N/22E-24M01 M		--	8.3	220	--	--	16	--	0.0	114	--	4.0	--	--	--	--	138	74
08/24/65	5050						.70		.00	1.87		.11						0
09N/23E-20F01 M		--	8.5	247	--	--	17	--	5.0	134	--	2.0	--	--	--	--	160	95
08/24/65	5050						.74		.17	2.20		.06						0
09N/23E-32A01 M		--	7.9	299	--	--	48	--	0.0	164	--	4.4	--	--	--	--	203	49
08/24/65	5050						2.09		.00	2.69		.12						0
08N/23E-16F01 M		--	8.5	277	--	--	24	--	6.0	140	--	4.3	--	--	--	--	171	91
08/24/65	5050						1.04		.20	2.30		.12						0
BRIDGEPORT VALLEY					60800													
05N/24E-25C01 M		--	7.9	128	--	--	5.7	--	0.0	71	--	0.8	--	--	--	--	88	51
08/24/65	5050						.25		.00	1.16		.02						0

TABLE E-1

MINERAL ANALYSIS OF GROUND WATER

STATE WELL NUMBER / DATE / TIME / LAB / SAMPLER	TEMP	LAB-PH / FLD-PH	EC LAB / FLD	MINERAL CONSTITUENTS IN MILLIGRAMS PER LITER / MILLIEQUIVALENT PER LITER / PERCENT REACTANCE VALUE									MILLIGRAMS PER LITER				
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	F	B	SIO2	TDS SUM	TH NCH
05N/25E-28K01 M 08/24/65 SCSC	--	8.7	442	-- 	-- 	34 1.48	-- 	9.0 .30	222 3.64	-- 	6.6 .19	-- 	-- 	-- 	-- 	301 	154 0
05N/25E-28G01 M 08/24/65 SCSC	--	8.4	269	-- 	-- 	20 .87	-- 	5.0 .17	136 2.23	-- 	4.2 .12	-- 	-- 	-- 	-- 	201 	83 0
04N/24E-13EC1 M 08/24/65 SCSC	--	6.7	98	-- 	-- 	3.4 .15	-- 	0.0 .00	49 .80	-- 	0.0 .00	-- 	-- 	-- 	-- 	74 	36 0
04N/25E-04BC1 M 08/24/65 SCSC	--	8.6	864	72 3.59 42	13 1.07 13	82 3.57 42	13 .33 4	12 .40 5	160 2.62 31	235 4.89 57	23 .65 8	1.6 .03 	-- 	.3 	-- 	631 530	233 82
04N/25E-04FC1 M 08/24/65 SCSC	--	8.3	2890	-- 	-- 	581 25.27	-- 	0.0 .00	999 16.38	-- 	129 3.64	-- 	-- 	-- 	-- 	2030 	311 0
TRUCKEE VALLEY				66700													
17N/16E-07NC1 M 08/17/65 SCSC	--	7.4	124	-- 	-- 	4.4 .19	-- 	0.0 .00	61 1.00	-- 	6.7 .19	-- 	-- 	-- 	-- 	85 	51 1
17N/16E-08MC1 M 08/17/65 SCSC	--	7.6	150	-- 	-- 	6.4 .28	-- 	0.0 .00	63 1.03	-- 	13 .37	-- 	-- 	-- 	-- 	102 	54 3
17N/16E-14F01 M 08/17/65 SCSC	--	7.4	128	-- 	-- 	3.4 .15	-- 	0.0 .00	79 1.30 1	-- 	1.4 .04	-- 	-- 	-- 	-- 	88 	59 0
17N/16E-16LC1 M 08/17/65 SCSC	--	7.2	133	-- 	-- 	4.1 .18	-- 	0.0 .00	67 1.10	-- 	6.4 .18	-- 	-- 	-- 	-- 	112 	50 0
17N/16E-17F01 M 08/17/65 SCSC	--	7.0	159	-- 	-- 	6.6 .29	-- 	0.0 .00	72 1.18	-- 	12 .34	-- 	-- 	-- 	-- 	107 	57 0